BOROUGH AND PORT OF LANCASTER.

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Annual and Quarterly Reports

OF THE

MEDICAL OFFICER OF HEALTH

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AND

INSPECTOR OF NUISANCES,

F. W. SMITH,

Associate of the Sanitary Institute,

FOR THE YEAR 1898.

LANCASTER:
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Borough of Lancaster.

Annual Report of Medical Officer of Health.

To the Mayor, Aldermen and Burgesses being the Urban
Sanitary Authority for the Borough of Lancaster.

Mr. Mayor, Mr. Chairman, and Gentlemen,

In presenting this my thirteenth Annual Report upon the health and sanitary condition of the Borough of Lancaster, I offer you my congratulations upon the continued prosperity and extension of the town as evidenced by the activity of the building trade.

The rapidity with which houses are occupied when built, and the great difficulty experienced in obtaining one are sure evidence that Lancaster is in a thriving condition.

Estimating the gross population by the method I have always followed, namely, adding one-tenth of the last decennial increase (as shewn by the census) to the estimate for the preceeding year, the figures for the year 1898 are 39,427.

To obtain the corrected population, I deduct from this number 2,882, which is the population of the six principal Institutions in the town. This makes the corrected population for the year 1898 36,545.

The acreage of the Borough is 1,680 acres, which gives an annually increasing density now reaching 23·46 persons to each acre. Of course this bald statement only inadequately conveys a correct notion of the real state of affairs, as some portions of the district are very sparsely inhabited owing to the land not being available for building purposes, whilst other portions will probably have a population density approaching 100 per acre.

The rateable value for the year 1898 amounted to £149,199.

The total number of deaths registered in the Borough of Lancaster during the year 1898 was 758, equal to a gross annual death-rate of 19·22 per 1,000 of gross population. Of these deaths 366 were those of males and 392 those of females. In comparison with 1897, an increase is shewn, there being registered in that year the deaths of 726 persons, equal to a gross annual death-rate of 18·99 per 1,000 of gross population. In that year the 726 deaths were divided into 381 males and 345 females.

In the town proper the number of deaths occurring in the year 1898, excluding those which happened in the six principal Institutions was 515, equal to an annual corrected death-rate of 14·09 per 1,000 of population. During 1897 the deaths of 492 persons were registered as occurring in the same area, equal to an annual corrected death-rate of 14·91 per 1,000 of population.

Of the 515 deaths occurring in the Borough 255 were those of males and 260 those of females, 162 occurred in infants under 1 year old, 65 children over 1 year and under 5 years, 191 in persons 5 years old, and under 65 years, and 97 in persons over 65 years of age.

The 162 deaths of children under 1 year old, show an increase of 17 on the number for the year 1897, and are equal to an infantile death-rate of 158 per 1,000 registered births.

This to my mind shows a shocking state of affairs, 15·83 per cent. of children born in 1898 died before reaching the age of 12 months. Year after year I have drawn attention to this matter, with how scant a result is now shown. I have endeavoured to point out the causes, and to show the remedy for this lamentable death-rate in the past.

This year, further on in the report, I point out another means of checking the yearly loss to the community, which I may be pardoned for hoping will attract more attention than my previons efforts.

The yearly loss is shewn below in tabular form :—

	No. of Deaths under 1 year.	No. of Births in each year.	Percentage of Infantile Deaths to Births.	Birth-rate.	Death-rate.
1890	154	923	16·68	32·65	19·33
1891	153	977	15·66	31·29	19·52
1892	150	947	15·83	32·08	17·95
1893	165	991	16·64	32·34	17·23
1894	112	908	12·33	31·49	13·00
1895	138	936	14·74	28·40	15·66
1896	152	938	16·20	27·46	14·02
1897	145	957	15·15	27·07	13·91
1898	162	1023	15·83	24·94	14·09

Much information may be gained from a study of the time of year when these infantile deaths occurred, consequently I have arranged them to shew the deaths in each month :—

	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Totals.
Bronchitis and Pneumonia	4	1	1	4	2	4	1		1	2	10	7	37
Diarrhœa					1		1	10	9	1			22
Whooping Cough....								1	1	1	1	4	8
Tubercular Disease ..			2	2	2		1	2	6	1	4		20
Gastro-enteritis	1		1	2			1	1	3	1			10
Meningitis						2			1	2			5
Malnutrition							1						1
Convulsions..........	1	3	2	3	1	1	2	2	2	1	1	4	23
Premature Birth......	1	2		1		1	1	2		2	2		12
Asthenia		3	1	1		2			3	1			11
Atelectasis										1	2		3
Measles	1											1	2
Syphilis	1												1
Hœmophilia				1									1
Parasitie Stomatitis ..				1									1
Intus-susception......				1									1
Inguinal Hernia......											1		1
Patent Foramen Ovale					1								1
Died suddenly, natural causes						1							1
Teething							1						1
	9	9	7	16	7	11	9	18	26	13	21	16	162

Of only secondary importance to the deaths of infants under 1 year old are the deaths of children who have lived to that age, but succumbed before they reached 5 years.

For the year 1898 the number of such deaths is 65, far too high a number, but better by 27 than the year 1897, when the number reached 92.

Out of the 515 deaths occurring in the Borough, 227 or nearly 5-11ths occurred in these two age periods.

The deaths of over 5 and under 15 years number 18, an increase of 2 over the number which occurred in 1897.

The deaths of persons over 15 and under 25 years are 30, 13 more than the number for 1897.

The deaths of persons over 25 and under 65 years were 143, an increase of eleven over the number for 1897.

The deaths of persons over 65 years of age were 97, outnumbering those which occurred in 1897 by 7.

Deaths.	1890	1891	1892	1893	1894	1895	1896	1897	1898
Under 1 year	154	153	150	165	112	138	152	145	162
Over 1 and under 5	77	78	92	100	40	65	48	92	65
Over 5 and under 15	23	30	21	16	16	14	16	16	18
Over 15 and under 25 ...	27	22	20	23	17	27	21	17	30
Over 25 and under 65 ...	124	131	127	100	125	156	143	132	143
Over 65	127	139	120	124	103	116	99	90	97
Total deaths all ages	532	553	530	528	413	516	479	492	515

The mortality in the six principal Institutions of the town for the year 1898 was as follows:—

Deaths in the County Asylum	146
,, Royal Infirmary	43
,, Union Workhouse	52
,, Bowerham Barracks	1
,, Ripley Hospital	1
	243

whilst the figures for 1897 were:—

The County Asylum	147
The Royal Infirmary	36
The Union Workhouse	46
The Castle	2
The Ripley Hospital	3
	234

showing an increase of nine in the year 1898.

Below I give the principal statistics of the town for the past nineteen years :—

	Gross Population.	Gross No. of Deaths.	Gross Death Rate.	Corrected Population.	Corrected No. of Deaths.	Corrected Death Rate.	No of Zymotic Deaths.	Zymotic Death Rate.	No. of Births.	Birth Rate.
1880	20321	477	23·47	18977	354	18·65	..	.	..	..
1881	20664	507	24·53	19295	379	19·64	..	..	..	..
1882	21233	528	24·86	19649	408	20·76	..	..	..	..
1883	21802	614	28·16	19772	414	20·93	..	..	..	..
1884	22371	630	28·16	20080	431	21·46	37	1·84	687	30·70
1885	22940	531	23·14	20388	405	19·86	36	1·76	745	32·47
1886	23510	605	25·73	20697	425	20·53	27	1·30	769	32·70
1887	24079	660	27·40	21266	453	21·25	54	2·53	708	29·40
1888	26189	602	22·99	23376	483	20·66	40	1·71	757	28·90
1889	29876	745	24·93	27063	537	19·84	123	4·54	988	33·07
1890	30455	742	24·36	27738	532	19·17	50	1·80	923	30·30
1891	31034	741	23·87	28317	553	19·52	48	1·69	977	31·48
1892	32417	756	23·32	29535	530	17·95	80	2·52	947	29·21
1893	33524	756	22·55	30642	528	17·23	87	2·56	991	29·56
1894	34631	618	17·84	31749	413	13·00	27	·85	1008	29·10
1895	35830	750	20·93	32948	516	15·66	43	1·30	936	26·12
1896	37029	729	19·68	34147	479	14·02	40	1·37	938	25·33
1897	38228	726	18·99	35346	492	13·91	109	2·85	957	25·03
1898	39427	758	19·22	36545	515	14·09	77	1·95	1023	25·94

ZYMOTIC DEATHS.

The seven principal Zymotic Diseases have been registered as the cause of 77 deaths in the year 1898, and were as follows :—

Measles	8
Diarrhœa	36
Enteric Fever	16
Scarlet Fever	1
Whooping Cough	13
Puerperal Fever	3
	77

equal to an annual zymotic death-rate of 1·95 per 1,000 of population.

In 1897 there were 109 such deaths :—

Measles	55
Diarrhœa	32
Enteric Fever	16
Scarlet Fever	2
Whooping Cough	2
Diphtheria	1
Puerperal Fever	1
	109

equal to an annual zymotic death-rate of 2·85 per 1,000 of population.

For the sake of comparison I now give the zymotic deaths, the zymotic death-rate, other deaths, total deaths, and gross death-rate for past twelve years :—

Year.	Zymotic deaths.	Zymotic death-rate.	Deaths other than zymotic.	Total deaths.	Gross death-rate.
1887	54	2·53	606	660	27·40
1888	40	1·71	562	602	22·99
1889	123	4·54	622	745	24·93
1890	50	1·80	692	742	24·36
1891	48	1·69	693	741	23·87
1892	82	2·52	674	756	23·32
1893	87	2·56	669	756	22·55
1894	27	·85	591	618	17·84
1895	43	1·30	707	750	20·93
1896	47	1·37	682	729	19·68
1897	109	2·85	617	726	18·99
1898	77	1·95	681	758	19·22

It will be observed that there is this year a decrease in the number of zymotic deaths, although I am sorry to report that measles are again epidemic in the town, and cases of whooping cough are frequent.

The time of year when these zymotic deaths occurred is shown as follows :—

	Measles.	Enteric fever.	Puerperal fever.	Scarlet fever.	Relapsing fever.	Continued fever.	Whooping cough.	Diarrhœa.	
January	1	2							3
February		1	1						2
March		1		1	1				3
April		1							1
May		3				1	1	1	6
June		1							1
July			1					2	3
August		1	1				1	11	14
September	1	1					1	18	21
October							1	4	5
November	2	1					2		5
December.......	4	2					7		13
	8	14	3	1	1	1	13	36	77

I would here draw the attention of the Authority to the incidence of these diseases. It may be observed that the deaths from diarrhœa, with one exception, all occurred in the four hottest months of the year.

The deaths from measles occurred in the winter months, being chiefly caused by respiratory diseases supervening upon the fever.

The same remark applies to the cases of whooping cough, while the deaths from enteric fever were not confined to any particular season, but were scattered over the whole year.

Table showing a comparative statement of the general death-rate, zymotic death-rate, and infantile mortality in England and Wales, the thirty-three great towns, and Lancaster, for the year 1898:—

1898.	England and Wales.	Thirty-three Great Towns.	Lancaster.
General death-rate............	17·6	19·0	14·09
Zymotic death-rate	2·22	2·85	1·95
Infantile mortality............	161	178	158

Table showing the death-rate of each of the seven principal zymotic diseases in Lancaster in comparison with the same rates in England and Wales for the year 1898:—

1898.	England and Wales.	Lancaster.
Annual death-rate from Small-pox...............	·01	...
,, ,, Measles	·41	·202
,, ,, Scarlet Fever.........	·11	·025
,, ,, Diphtheria	·24	...
,, ,, Whooping Cough ...	·31	·329
,, ,, "Fever"...............	·18	·481
,, ,, Diarrhœa...............	·96	·913
Totals........................ ...	2·22	1·950

I have again calculated the percentage of deaths under five years to births, as it shows the rate of mortality in Lancaster in another and less favourable light:—

	1894.	1895.	1896.	1897.	1898.
Deaths under 5 years...	152	203	200	237	227
Births	1,008	936	938	957	1,023
Percentage of Deaths under 5 years to births	15·07	21·68	21·36	24·76	22·18
Population	31,759	32,948	34,147	35,346	36,545
Total Deaths	413	516	479	492	515
Death-rate calculated in usual manner	13·00	15·66	14·02	13·91	14·09

The deaths of Infants under 5 years still bear an undue proportion to the total deaths—227 to 515, or nearly 5-11ths of the whole

Of these 227 deaths, 52 were caused by bronchitis, pneumonia, and pleurisy, 35 by diarrhœa, 12 by whooping cough, 8 by measles, 2 by enteric fever, 1 by scarlet fever, 1 was the result of an injury, and the deaths of 118 were referred to other causes.

Many of these deaths, although assigned to various diseases, are, in my opinion, the direct result of carlessness and injudicious treatment, and are almost entirely preventible.

The excellent work of this Authority in improving the condition of the yards and courts, although little seen or appreciated by the public, steadily goes on, and every year sees some nuisances cleared away. The yards and courts which were scheduled by the Insanitary Dwellings Sub-committee when they inspected the town some years ago have not been forgotten. Several of the yards, &c., on the list given last year have been attended to—some by this Authority, and some by the owners—whilst many others are in hand. I am glad to report that the list will soon be completed. When this is accomplished, a great sanitary improvement will have taken place, and I hope it will be followed up by another visit of inspection by the same Committee.

SMALLPOX.—I am pleased to say that no case of this disease has been reported to me during 1898.

The chief event of the year in connection with Smallpox has been the passing of the Vaccination Bill, which substitutes the use of glycerinated calf lymph for arm to arm vaccination, abolishes attendance at fixed stations in favour of domiciliary visits by the Public Vaccinator, and permits those persons who do not believe in the great Jennerian discovery to avoid vaccination by a statutory declaration of conscientious objection. However much I personally regret the change, I do not propose to state my reasons here. No good purpose could be served, and as the Act has become law, it behoves one to make the best of it, and carry out its intentions loyally.

I notice with regret that no provision exists in the Act to secure four cicatrices in every case of vaccination.

In my opinion the only reasonable objection to vaccination is that all persons are not equally protected. This is caused by vaccination being so frequently performed with only one insertion, thus reducing protection to a minimum. Against all this, I am glad to say that a permanent Smallpox Hospital has been commenced, of sufficient size to enable the Authority to cope successfully with the initial cases of an outbreak of smallpox. This has long been one of the town's sanitary requirements, and it is gratifying to record the promise of its fulfilment.

ENTERIC FEVER.—This disease has been more or less prevalent with us throughout the whole year. In the last six years the monthly receipt of notifications of this disease has been as follows :—

	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
1893	2	1	3	3	3	2	1	4	7	3	8	2	39
1894	3	2	3	1	8	3	3	6	3	7	2	6	47
1895	6	5	1	1		1	4	3	1	2	3	1	28
1896	4	11	14	9	6	7	4	2	1	5		1	64
1897	7		8	2	4	1		5	11	10	3	4	55
1898	5	11	9	5	11	3	8	7	7	5	7	9	87
	27	30	38	21	32	17	20	27	30	32	23	23	320

From the 88 cases of this disease notified in 1898, 18 deaths have been registered—15 in the borough, and 3 in the institutions. This gives an attack-rate of 2·20 per 1,000 of population, a case-mortality of 20·68 per centage of attacks, and an enteric fever death-rate of ·45 per 1,000 of population. In 1897 there were 16 deaths from this cause; the attack-rate was 1·43 per 1,000 of population, the case-mortality 29·09 per centage of attacks, and the enteric fever death-rate ·41 per 1,000 of population.

Thirty-six cases were treated at the Sanatorium, with eight deaths, equal to a case-mortality of 28·54 per centage of attacks; and 46 were treated at home, with seven deaths, equal to a case-mortality of 15·55 per centage of attacks. Eighty-two cases occurred in the borough, and six in the various institutions. The 82 cases which occurred in the borough had a case-mortality of 18·51 per centage of attacks, and the six which occurred in the institutions a case-mortality of 50 per cent. The deaths occurred at all periods of the year, and I give the number of deaths in each month of the year 1898 occurring in the borough.

January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
2	1	1	1	3	1	0	1	2	0	1	2

Last year I gave a list of the cases which had been notified, and pointed out that they occurred all over the town. The same obtains this year, cases having been reported from Charles Street, King Street, Mary Street, Penny Street, Primrose Street, Moor Lane, Prospect Street, Lune Street, Cross Street, Cavendish Street, Damside Street, Swan Court, Clarence Street, Germany Street, St. Leonardgate, Edward Street, China Lane, Eastham Street, Rydal Road, Castle Hill, Chapel Street, Henry Street, Parliament Street, Seymour Street, Adelaide Street, Norfolk Street, Vincent Street, Melbourne Road, Cable Street, Bradshaw Street, Long Marsh Lane, Bridge Lane, Park Square, Aldcliffe Road, Broadway, Cromwell Road, Heysham Road, Lucy Street, Common Garden Street, and St. Mary's Place.

Many of these are, no doubt, undesirable localities, but on the other hand cases have occurred in newly built property fitted up with every sanitary appliance, a fact which makes it difficult to account for the attacks.

In last year's report I stated that it was intended to treat the back yards of premises in which cases had been notified with a disinfectant solution and powder, which had been found lethal to the enteric fever bacillus. The disinfectant selected was perchloride of mercury, and the places indicated have been treated with it, and it has been distributed by a man specially told off by the Authority for this duty. The bedding from the cases has been passed through the disinfector, and all sanitary defects found have been remedied. I hope that when the time comes round for another annual report an improvement will have been found to have taken place. The damp character of the year has no doubt had somewhat to do with the increase of the cases of this disease, which is always considered much more amenable to good sanitation than some other zymotic diseases. There is more than a probability that cases of enteritis, gastro-enteritis, and sometimes pneumonia have been notified as this disease. It is in such cases as this that an appeal to bacteriological diagnosis should be made.

SCARLET FEVER.—Nineteen cases of Scarlet Fever have been notified during the past twelve months, with one death. These cases all occurred in the Borough, all appeared to be unconnected with each other, and I am quite at a loss to state the source of infection. The one death from Scarlet Fever gives a death-rate from that cause of ·02 per thousand of population. The case mortality is 5·26 per centage of attacks. In the year 1897 eleven cases were notified, with two deaths, equal to a scarlatinal death-rate of ·05 per thousand of population, and a case mortality of 18·18 per centage of attacks.

PUERPERAL FEVER.—Three cases of this disease, all of which proved fatal, were notified in 1898. In 1897 one was notified, and the result was fatal in this case also. I doubt very much whether all the cases of this disease are notified. In slight degrees it is difficult to determine the septic character of the disease. The treatment which I referred to in my report for 1897 seems to act like a charm in some cases, whilst in others it appears quite inoperative. Further experience will no doubt relegate this method of treatment to its proper position.

MEASLES.—Hardly have we got free from the previous epidemic of measles when we find ourselves engaged with another one. When Dr. Thomson held the inquiry into the last epidemic he favoured the idea that the infection was derived from isolated cases which had been occurring in the town for a considerable period, although at that time it appeared to me to be due to an importation from without. Exactly the same thing has occurred this year. Ever since the epidemic of 1897 may be said to have ceased—say about September—cases have kept occurring. I will try to show which cases were connected with one another, and give the dates of their occurrence. These cases are fifty-five in number, and are as follows :—

No.	Date. 1897.	Address.	Day School.		Remarks.
			Connected with.	Attending.	
1	September 16	Briery Street	Marsh		The case immediately preceding this occurred in this Street.
2	November 2	Greenfield Street	Wesleyan		
3	December 28	Main Street	St. Luke's		The last case reported from this Street was on Aug. 30. No School.
4	January 8	Victoria Yard	St. Thomas'		
5	January 24	Dale Street	Wesleyan	Bowerham	
6	January 26	Elgin Street		Christ Church	
7	February 18	Bulk Street	St. Anne's		
8	February 24	Regent Street		Wesleyan	Notified as Rötheln.
9	February 24	Regent Street	Wesleyan		Notified of Rötheln.
10	March 19	Coverdale Road	Marsh		Last case in this Street, August 17.
11	March 31	Windy Hill	Fenton Street		
12	April 18	King Street	St. Thomas'		
13	April 20	King Street	St. Thomas'		
14	May 2	Norfolk Street			
15	May 9	Adelphi Street			Notified as Rötheln.
16	May 28	Alma Road	Fenton-street and and Boys' National		Notified as Rötheln.
17	June 2	Dale Street	St. Thomas'		Imported from Darlington.
18	June 10	Near Castle Station			Imported from Gloucester.
19	June 13	Dale Street	St. Thomas'		Same house as case 17.
20	June 15	Ramparts			
21	June 21	Quernmore Road		Private School	Infection came from Morecambe—all cases marked Private School contracted the disease from each other. Cases 21 and 22 occurred in same house, and also cases 24 and 25.
22	June 21	Quernmore Road		Private School	
23	June 22	Dalton Square		Private School	
24	June 22	Near Castle Station		Private School	
25	June 22	Near Castle Station		Private School	
26	June 22	Main Street	St. Luke's		
27	June 24	Main Street	St. Luke's		

No.	Date. 1897.	Address.	Day School.		Remarks.
			Connected with	Attending.	
28	June 24	St. Oswald Street		Private School	Same house.
29	June 24	St. Oswald Street		Private School	
30	June 24	King Street		Private School	
31	June 25	Greaves		Private School	
32	June 30	River Street	St. Mary's		
33	June 30	Main Street			
34	July 1	China Lane	Fenton Street		
35	July 2	St. Oswald Street		Private School	Same house as Cases 28 and 29.
36	July 2	St. Oswald Street		Private School	
37	July 2	St. Oswald Street	Private School		
38	July 2	St. Oswald Street	Private School		
39	July 5	Dalton Square	Private School		Same house as case 23.
40	July 5	Greaves		Private School	Same house as case 31.
41	July 6	Greaves	Private School	Grammar School	
42	July 7	Main Street			
43	July 16	Cross Street	British		
44	July 17	Main Street	St. Luke's		Lives next door to case 26.
45	July 22	Bradshaw Street	Christ Church		
46	July 23	Main Street			
47	July 29	Bradshaw Street	Christ Church		
48	July 30	Bradshaw Street	Christ Church		
49	August 2	Ullswater Road			Imported from London.
50	August 8	Albert Road	St. Luke's		Adjoining houses.
51	August 8	Albert Road	St. Luke's		
52	August 17	De Vitre Street			
53	August 18	George Street	St. Peter's		
54	September 5	Pot Houses	Quay		Same house.
55	September 15	Pot Houses	Quay		

At the end of October, however, the disease appeared in the Primrose district, two cases being notified.

The disease in this case had, in all probability, been brought from London and spread through the Primrose and Bowerham districts.

The disease rapidly assumed alarming proportions, and the Bowerham Board School was closed by this Authority. The cases occurred as follows:—

Week ending	November	5	26
,,	,,	12	7
,,	,,	19	49
,,	,,	26	15
,,	December	3	31
,,	,,	10	7
,,	,,	17	9
,,	,,	24	11
,,	,,	31	4
			159

making, with the cases notified earlier in the year, 210.

As to the means used to check the spread of the disease, everything suggested by Dr. Thompson after his inquiry has been carried out as strictly as possible, with the following two exceptions :

It was recommended that the early cases should have Hospital isolation, but it has been found quite impossible to carry this out, owing to the opposition of the parents, and as yet no case has been admitted to the Sanatorium.

We were also advised to disinfect by steam all articles from the sick room. For a similar reason this, although done in most instances, has not been carried out in every case, but where it was found impracticable to remove the articles, disinfection has been carried out as far as possible with the vapour of formic aldehyde.

The notification of suspicious cases of illness by the Education Authorities has been amended in accordance with the suggestion received. Information has been received from the Head Teachers of the Schools, and from the School Attendance Officers.

The increase in the number of Sanitary Inspectors, advised by Dr. Thomson, was considered by the Authority, and deferred pending action by the Central Authority in the matter of Tuberculosis, which would necessitate some re-arrangement of duties.

I feel that as attention has been called to our system of dual notification, I ought to state that of the 210 cases of Measles reported this year, 72 were notified by the doctor in attendance, 82 by the parents, and six by both doctor and parent. Last year reference was here made to the position of the Sanitary Office, and I am pleased to note that it is in course of removal to a more noticeable position, which will, I think, be a great advantage.

Rotheln.—Five cases of German Measles were reported in 1898, none of which were fatal. The chief interest in this disease lies in the fact that it is apt to be confounded with cases of ordinary Measles.

Diphtheria.—Six cases of this disease were notified in 1898, which all recovered. Five cases occurred in the Borough, and one in the Ripley Hospital. In 1897 one case only occurred, which terminated fatally.

The diagnosis of the medical attendant was verified in the first case by bacteriological examination, and as all the town cases occurred in one house one examination decided all.

Diarrhœa.—For the first time diarrhœa was by resolution of this Authority rendered notifiable during the months of July, August, and September.

Three hundred and eighteen notifications were received in the three months, but I feel sure that this number includes many cases which were not of a zymotic character, thus marring the usefulness of the information. Another year I hope the notifications will be confined as much as possible to cases of epidemic summer diarrhœa.

Depending as diarrhœa does upon many and varied morbid conditions, such as dentition, indigestion, improper feeding, catarrhal conditions of mucous membrane of bowel, and general insanitary conditions, I am aware that the diagnosis of epidemic diarrhœa is beset with difficulties ; but still I feel that many cases were reported as epidemic diarrhœa which, had more care been exercised, would have received some more appropriate designation. It is necessary that these conditions should be differentiated, in order that full sanitary benefit may be derived from its notification.

In the cooler portions of the year the disease is of a mild type, and the cases scattered ; but when the ground temperature reaches 46° it becomes epidemic, and assumes a very serious aspect. It is here that the Sanitary Authority solicits the assistance of the Profession. Every year a large number of children are carried off by this preventbile disease, and its notification was determined upon with the view of checking the mortality from this cause.

The belief that the damp and sewage-polluted subsoil around dwellings is the chief breeding ground of the bacillus of this disease suggested that benefit might be obtained by disinfecting the backyards of houses in which this disease occurred. This has accordingly been done during the months of July, August, and September, and the result must now be awaited. I do not anticipate much success from this procedure carried out for one year only, but I think that after treatment for two or three years the progress of the disease may be checked.

I must again refer to the notification of this disease, and I most earnestly desire to draw the attention of my medical brethren in the town to the fact that success can only be attained by their goodwill and co-operation. No sanitary benefit can ever be obtained by the notification of diarrhœa obviously the result of non-zymotic causes.

Let me point out by means of the following table that most of these cases occur in the Borough amongst young children in July, August, and September.

The table following shows the months in which these deaths occurred :--

		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
1897	under 5	..	..	..	..	..	1	1	12	14	3	..	..	31
	over 5	..	..	..	..	..	..	..	..	1	..	..	..	1
1898	under 5	..	..	..	..	..	..	1	12	18	4	..	..	35
	over 5	..	..	..	..	..	..	1	1	..	..	..	..	2
mean air temperature		43·7	40 7	40 1	47·8	50·8	56·2	58·5	60·8	59·2	52·5	46·4	44·6	

The following numbers show the deaths in the Borough from this cause from 1888 to the present time : —

1888	1889	1890	1891	1892	1893	1894	1895	1896	1897	1898
22	24	17	11	26	38	16	32	10	31	37

equal to an average for the eleven years of 24.

PHTHISIS AND OTHER TUBERCULOUS DISEASES.—The deaths from Phthisis and other Tuberculous Diseases occurring during 1898 in the whole district were 100, equal to an annual death-rate from this cause of 2·53 per thousand of population.

In the Borough proper these deaths were 65 in number, equal to an annual corrected death-rate from this cause of 1·77 per thousand of population.

From Phthisis alone there were in the whole district during 1898 63 deaths, equal to an annual death-rate of 1·59 per thousand of population.

In 1897 there were 66 such deaths in the same district.

In the Borough alone 35 were registered during 1898, equal to an annual death-rate from this cause of ·95 per thousand of population. Of these 35 deaths 17 were those of males and 18 those of females, and all were over five years of age.

With ever-increasing force evidence of the infectious character of Tuberculosis has been accumulating, with the result that the year 1898 has witnessed the inauguration of a Society which aims by united effort to check the ravages of this fell disease, and if possible stamp it out. The Society, which I am glad to say this Authority has joined, hopes to secure its object, which is "The Prevention of Tuberculosis," by the following methods, which I have taken from one of the pamphlets issued by the Society :—

I. The education of public opinion and the stimulation of individual initiative by

  (*a*) A central office for the collection and distribution of information as to the modes of diffusion of Tuberculosis and measures of prevention.

  (*b*) The circulation of pamphlets and leaflets setting forth in plain language the results of scientific investigation of the above points.

  (*c*) Public Lectures by men approved by the Council, Addresses at Congresses, and other public gatherings.

  (*d*) Co-operation with other Societies having for their object the promotion of public health.

  (*e*) The Co-operation of the public press.

  (*f*) Periodical congresses, and the issue of an annual report.

  (*g*) The promotion of the establishment of open air sanatoria for tuberculous patients.

II. The influencing of Parliament, County Councils, Boards of Guardians, Chambers of Agriculture, and other Public Authorities on matters relating to the prevention of tuberculosis.

III. The establishment throughout the kingdom of Local Branches of the Association, which are affiliated with the central office on payment of one-fifth of subscription of membership. Secretaries of branches are supplied with all literature at cost price.

I am sure I cannot do better than give you a re-print of one of the pamphlets issued by this society, as it is so plain and straightforward in its language, and may be "easily understanded of the people." In doing so I shall be helping to give it greater publicity.

> "Consumption (with other forms of tuberculosis) causes one death in every eight in this country. Of all deaths in the United Kingdom between the ages of twenty-five and thirry-five *nearly one-half are due to consumption.*
>
> It gives rise to a vast amount of suffering and permanent ill-health. It is calculated that in Great Britain at the present moment at least a quarter of a million persons are suffering from it.
>
> The disease is preventible.
>
> Its predisposing cause is a low state of health, such as may be inherited, or may be induced by over-crowding; the stuffy air of ill-ventilated rooms; dirty, dark, and damp dwellings; bad or insufficient food; intemperance; and infectious fevers, or other illnesses.
>
> Consumption is, however, contracted by taking into the system the germ or microbe of the disease, either in the dust of the air or in food and drink (principally unboiled milk).
>
> These germs are only derived from persons or animals already suffering from consumption, or some other form of tuberculosis. They are found in vast numbers in the phlegm, spit, or expectoration of a consumptive person.

In a moist state this expectoration does not infect the air, but if allowed to dry and become dust it is exceedingly dangerous, and is then the chief means by which the disease is spread from person to person.

There is practically no risk of contracting the disease from the breath of a consumptive person.

There is no objection to a consumptive invalid being closely atended upon by healthy persons, who may also share the same bedroom, though not the same bed.

Precautions.—For the protection of their own families, and to prevent the spread of the disease among the general public, the following simple precautions must be taken by consumptive persons:

The consumptive person must not expectorate about the house, nor on the floor of any cab, omnibus, tram-car, railway carriage, or other conveyance. Spitting about the streets, or in any public buildings (churches, schools, theatres, railway stations, &c.) is a dangerous as well as a filthy habit.

The consumptive person must not expectorate anywhere except into a special vessel or cup kept for the purpose, and containing little water.

When out of doors, a small, wide-mouthed bottle, with a well-fitting cork, may be used; or a pocket spittoon, which may be obtained from any chemist.

For wiping the mouth a rag or paper, which can afterwards be burnt, should be used instead of a handkerchief.

The collected expectoration must be carefully burnt on the back of the fire at least once daily; this is the simplest, quickest, and safest way of destroying the germ.

When there is no fire, the expectoration must be washed into the drain or buried in the earth.

The cup or spittoon must then be well washed with boiling water.

When not provided with a proper vessel, a consumptive person must not spit into a handkerchief, but into a piece of rag or paper, which must be burnt.

Consumptive persons must not swallow their expectoration, as, by so doing, the disease may be conveyed to parts of the body not already affected.

A consumptive person must not kiss or be kissed on the mouth.

General Precautions to be Observed:—All rooms occupied by consumptive persons should be as free from damp, and as well lighted and ventilated as possible. Fresh air, light, and sunshine are most important preventives of consumption. Overcrowding should be avoided.

No chimney should ever be blocked up, and windows should be kept open as much as possible.

Cleanliness and good sanitary surroundings are important, both for the prevention and for the cure of consumption.

Rooms, passages, and staircases must be kept free from dust. Where there is dust there is danger. Do not chase dust about, or stir it up. Use damp dusters. Use plenty of tea leaves, or damp sawdust, for sweeping up the floor, Boil the dusters; burn the tea leaves and sawdust.

Milk, especially that used for children and invalids, should be boiled. Meat should be well cooked.

In the event of a death from consumption the room occupied by the invalid should not be used again until it has been thoroughly cleansed; advice may be sought from the local sanitary authority."

In this leaflet there are two paragraphs to which I would more particularly direct your attention. These are the fourth and the fifth.

The predisposing cause of consumption is a low state of health, such as may be inherited or induced in various ways.

From this we may gather that to reduce our death-rate from phthisis and tuberculous disease we must clear away from our midst the dirty, dark, damp dwellings of which there are so many in Lancaster. We must pay more attention to ventilation of houses, and must remove buildings which obstruct light as well as ventilation. We must pay more attention to overcrowding. We must do away with intemperance, with its consequent insufficiency of food and comfort. We must keep a watchful eye over the quality of that food and its freedom from disease germs. Finally we must check the spread of zymotic diseases, for these weaken the system, and render the body a fit place in which disease germs may multiply.

Leaving the predisposing, we come to the more immediate causes of the disease, namely, the taking into the system of the germ or microbe of the disorder, and which is done chiefly in two ways, by breathing it as it is contained in the dust of the air, or by swallowing food or drink contaminated with it. The dust of the air in towns contains the bacilli of phthisis in enormous numbers, and the bacilli are derived from the expectoration of phthisical people, which has been deprived of its moisture. Great importance is attached to the prevention of this dirty habit, especially in public places.

I have already in my report for the year 1895 adverted to the contamination of the dust of towns by the discharges of animals, including man himself. This source of infection can of course only be checked by securing the education and co-operation of at least all phthisical people. They little dream what harm they may be doing to their neighbours by their thoughtless habits.

The other chief mode of infecting the system with the bacillus of phthisis is by the consumption of contaminated food, most commonly milk. This subject has been discussed annually in my reports since 1894. The subject is so large, however, that I have no difficulty in finding a new portion to bring before your notice each year. At the present time this disease has attracted the attention of all thinking people. The newspapers teem with advice on the subject, and public opinion is quickly ripening. Some years, however, must necessarily elapse before any great reformation can be accomplished, and some intermediate steps should be taken. It is in my opinion useless to attempt to get rid of the diseased cattle which supply the milk, unless at the same time radical changes are made in the shippons where the cows spend nearly half their lives. It is useless to provide a cow with 800 cubic feet of air space, unless ventilation is provided and is kept in order. In future cattle of proved healthy parentage only should be kept, not too consanguinous, and the male parent should be more nearly approaching maturity than at present. A reversion to the use of a "bull-copy" or walled field attached to the bull-house or bull-hull, would in my opinion tend to a more healthy condition of the young stock, and we would meet with fewer of those enormous livers which are too frequently seen when the bull comes to the butcher. This would, in my opinion, more than compensate for the wildness of the bull, which could easily be met by increased care in the treatment of the animal. Familiarity has ever bred contempt, and at the present day many men treat the bull with as little respect as they would a sheep, with the usual result that in the end a bad accident happens, and the animal gets the blame and is destroyed. This is one of the reasons why the bull is usually sent to the butcher when he attains the age of two years, although I am aware that another reason is his decreased fertility, due, in my opinion, to his want of exercise. What I advocate is, in short, the open-air *preventative* treatment of tuberculous disease in cattle.

In the meantime something should be done to stem the death-rate from phthisis due to such causes, and I am of opinion that either by private enterprise, or, better still, by the action of this Authority, sterilization of the milk might be carried out, and the resultant purified milk sold to the public at a slightly enhanced price, sufficient to cover the cost of the process.

Those interested in this subject will find in the issue of the *Yorkshire Post* for December 3rd, 1898, a very interesting and instructive article on "Tuberculosis and the Milk Supply"—The question of Domestic Precaution." The Editor of the *Yorkshire Post*, in his issue of December 6th, whilst declining to re-issue the article in pamphlet form for his paper, gave permission to anyone to reprint it provided the source of the article was plainly stated.

In the *Journal of State Medicine* for December, 1898, vol. vi., No. 12, will be found a reference to the work initiated by Dr. Dufour at Fécamp, Normandy. This gentleman has there established under the title of "La Goutte de Làit" a society for supplying sterilised humanised milk in sterilised bottles for infants requiring artificial feeding. The particulars are too voluminous for transcription here, but a copy of the rules of this charitable society is in my possession, and can be seen by anyone interested in the matter. In three years the infantile mortality in Fécamp has been reduced 50 per cent., and the deaths of infants from Enteritis have been reduced from 30 to 16 per cent. Is it too much to hope that such an Institution might be inaugurated in Lancaster, where, with similar success, the lives of many infants might have been saved during the past year ?

This table shows the statistics of Phthisis for the last six years, arranged for easy comparison :—

	1893	1894	1895	1896	1897	1898
Total Deaths from Phthisis	70	54	79	59	66	63
Death-rate per 1,000 of population	2·08	1·55	2·20	1·59	1·72	1·59
Deaths from Phthisis in Borough	33	32	43	32	34	36
Deaths from Phthisis in Borough per 1,000 of population	1·07	1·00	1·30	·93	·96	·98
Deaths from Phthisis in the County Asylum	30	19	31	22	29	17
Deaths from Phthisis in the Royal Infirmary	2	2	1	2	1	6
Deaths from Phthisis in the Workhouse	5	1	4	2	2	4
Deaths from Phthisis in Castle	—	—	—	1	—	—
Deaths from Phthisis in Ripley Hospital	—	—	—	—	—	—
Deaths from Phthisis in Bowerham Barracks	—	—	—	—	—	—

RESPIRATORY DISEASES.

The deaths from Bronchitis, Pneumonia, and Pleurisy during the year 1898 number 136, equal to an annual death-rate from this cause of 3·44 per 1,000 of population. In the year 1897 these deaths numbered 110, and were equal to an annual death-rate from this cause of 2·86 per 1,000 of population.

Of these 136 deaths 97 occurred in the Borough, and 39 in the various Institutions.

The 97 deaths which occurred in the Borough are equal to a corrected annual death-rate from this cause of 2·65 per 1,000 of population. In 1897 there were 73 such deaths, equal to a corrected annual death-rate from this cause of 2·06 per 1,000 of population.

INFLUENZA.

Four deaths have been registered in 1898 as due to this disease, equal to an annual death-rate from this cause of ·10. In 1897 there were 7 deaths registered, equal to an annual death-rate from this cause of ·18 per 1,000 of population.

This disease is still with us, and cases are numerous, but happily the severity of its attacks is much diminished, and deaths are much less frequent than when it made its first appearance.

INJURIES.

This year deaths from injuries number ten only, equal to an annual death-rate from this cause of ·25 per 1,000 of population. In 1897 there were 16 such deaths registered, equal to an annual death-rate of ·41 per 1,000 of population.

UNCERTIFIED DEATHS.

Twenty-seven deaths have been registered this year in Lancaster without a medical certificate. This is a great increase, the number for 1897 being six, for 1896 twelve, and for 1895 twenty-one. This is a very unsatisfactory state of affairs, especially as the deaths are principally those of young children. Fifteen were under 12 months and 19 under 5 years of age. The annual death-rate of these deaths is this year ·68 per 1,000 of population.

INQUESTS.

In twenty-one cases it has been found necessary to hold an inquest. The annual death-rate of these cases is thus ·53 per 1,000 of population. The following is a list of the cases :—

M	34 years	Lockjaw.
M	69 years	Natural Causes.
M	4 years	Burns.
F	21 years	Perforation of Stomach.
F	5 years	Burns.
M	35 years	Heart Disease.
M	4 mths.	Natural Causes.
M	40 years	Accident.
F	24 years	Rupture of Blood-vessel in Lungs.
M	20 years	Accident.
M	37 years	Heart Disease.
M	34 years	Found Drowned.
F	22 years	Found Dead.
M	38 years	Fall from Scaffold.
F	47 years	Natural Causes.
F	$1\frac{8}{12}$ yrs.	Choked by Plum Stone.

M	21 years	Alcoholic Asphyxia.
M	33 years	Natural Causes.
M	4 mths.	Convulsions.
M	31 years	Accident.
F	5 years	Poisoned Accidentally.

BIRTHS.

The Births registered in Lancaster during 1898 for the second time reached four figures, being 1023 in number, equal to an annual birth-rate of 25·94 per 1,000 of population.

In 1897 the number of births was 957, equal to an annual birth-rate of 25·03 per 1,000 of population.

Of the 1,023 registered births 523 were those of males and 500 hose of females.

The birth-rate still continues to decline steadily co-incident with the fall in the death-rate.

The time of year when the births occurred is shown here :—

	Males.	Females.	Total.
January	46	51	97
February	46	47	93
March	49	47	96
April	54	42	96
May	38	33	71
June	47	43	90
July	39	51	90
August	38	28	66
September	37	47	84
October	38	43	81
November	43	28	71
December	48	40	88

The births for the last twelve years are shown below :—

Year.	No. of Births.	Males.	Females.	Rate per 1,000.
1887	708	377	331	29·40
1888	757	385	372	28·90
1889	988	508	480	33·07
1890	923	486	437	30·30
1891	977	490	487	31·48
1892	947	511	436	29·21
1893	991	491	500	29·56
1894	1008	526	382	29·10
1895	936	469	467	26·12
1896	938	466	472	25·33
1897	957	480	477	25·03
1898	1023	523	500	25·94

NOTIFICATION OF INFECTIOUS DISEASE.—During the year 1898 there were 648 notifications of infectious diseases, which were as follows :—

Scarlet fever	19
Diphtheria	6
Enteric fever	88
Puerperal fever	3
Measles	210
Rotheln	5
Diarrhœa	318
	649

Of these 649 cases, 634 occurred in the Borough, and 15 in the Institutions. In 1897 the notifications numbered 1294, and were as follows :—

Scarlet fever	11
Enteric fever	55
Measles	1228
	1294

BACTERIOLOGICAL DIAGNOSIS.—I am happy to say that through the courtesy of Professor Délepine I have been enabled to make arrangements with the Authorities at Owens College, whereby private practitioners in Lancaster can have the advantage of verifying or completing their diagnosis in cases of zymotic disease by bacteriological examination without cost to themselves. The concession of free bacteriological examination was made by this Authority some three or four years ago, but has only been exercised by the Medical Practitioners cf the town on rare occasions. I feel sure that if the advantages of this method in doubtful cases were more fully recognised by the Profession, the ease with which the procedure can be carried out by themselves, and the small amount of trouble involved, were more appreciated, the nature of many doubtful cases would be cleared up, and much anxiety spared.

Let me add, in conclusion, that it is not in every town that the Sanitary Authority is sufficiently progressive and generous enough to apply the public money to the bacteriological diagnosis of disease, and I again appeal to my Medical Colleagues to receive this aid to the solution of the many difficult questions of diagnosis which so constantly beset us in the spirit in which it is offered, and to avail themselves to the full of its great possibilities.

THE SANATORIUM.—During 1898 forty-seven cases of zymotic disease have been removed from their homes to the Sanatorium for isolation and treatment. Thirty-six were cases of Enteric Fever, and eleven of Scarlet Fever.

The thirty-six cases of Enteric Fever resulted in twenty-eight recoveries and eight deaths, whilst all seven cases of Scarlet Fever recovered.

Six of these cases have been under my care, and the remaining forty-one under their own private medical attendant.

I have visited the Sanatorium ninety-eight times during the year.

THE DISINFECTOR.—A great deal more work has been exacted of the Disinfector this year by the resolution of the Authority to use it for the purifying of the bedding, &c., after cases of Measles.

Something went wrong with it for a short time, but the fault being discovered and remedied, the machine now does its work well.

OLD PROPERTY.—No property of this description has been dealt with during the year 1898, but the warning I then gave to owners of such property still holds good, and in the near future the Authority will be compelled to deal with it, unless steps are taken to remedy matters without compulsion.

SCAVENGING AND THE SEWERS.—The more frequent removal of the ashes and waste products, of which I spoke in my last report, has been carried into effect during the past year. There is no longer to be seen the heaps of ashpit refuse in the street awaiting removal—a most unpleasant and unnecessary sight. The provision of some other means of dealing with these matters is becoming more pressing each day, as the present place of deposit is rapidly filling up.

The only method of dealing effectively with these waste materials seems to be the provision of a Destructor—a situation for which is somewhat difficult to find.

As far as my knowledge goes, the sewers appear to be doing their work quite satisfactorily ; at the same time I may say that I have in two instances had complaints of an offensive odour proceeding from the ventilators, which is to be looked for occasionally.

THE WATER SUPPLY has been of the same satisfactory nature as hitherto. It is a supply of the highest order.

FOOD AND DRUGS.—Thirty-four samples of food have, I gather from the Chief Constable's Report, been submitted for analysis, and all found genuine.

INSPECTION OF MEAT, &c.—I have visited the public abattoir about 25 times during the last twelve months, and have inspected the carcases of 22 animals prepared for the food of man.

These carcases were all affected by tuberculosis, and were dealt with in the same manner that has been followed in this town for the last twenty years.

It will be satisfactory to the Authority to know that the practice which has been followed is exactly that recommended by the Royal Commission on Tuberculosis, and that the report of that committee has necessitated no change in our manner of dealing with carcases.

I am glad to record that the manner of removing the calves has been altered by this Authority, and I am able to report that I have not, as in former years, seen any ill-usage practised towards them in their removal.

I still think there are too many people (both men and boys) at the slaughter-houses who have no right to be there. They probably come out of idle curiosity, and I understand that an attempt is to be made to alter this degrading practice.

SANITARY CONVENIENCES.—I am sorry to say I cannot record any increase in the number of these places. In a town so frequented by visitors as Lancaster is, I am sure better accommodation would be appreciated. I have examined these places frequently, and have always found all clean and in good order.

COWSHEDS AND DAIRIES.—As yet no regulations have been framed under the Dairies, Cowsheds, and Milkshops Orders of 1885 and 1886, although I understand that such action is purposed at no distant date.

These Orders provide for

(1) The registration of Cowkeepers and Dairymen.
(2) The establishment of New Dairies or Cowsheds under certain conditions.
(3) The health of the Cattle.
(4) The Cleanliness of the Vessels used.
(5) The Protection of the Milk from Infection.
(6) The Prevention of the Employment therein of Persons suffering from infectious diseases until all danger of infection is passed.

Some Parliamentary action based on the R port of the Royal Commission on Tuberculosis is looked for by the public, and I hope, if such is intended, it will not be long delayed.

Canal Boats.—The Inspector in his report gives an account of the action he has taken and it is therefore unnecessary for me to reproduce it.

Common Lodging-houses.—The Corporation have, I am glad to say, opened another Lodging-house during the year. There now appears to be no great trouble in finding beds as there was during the past summer. The details will be found in the Inspector's report.

Bakehouses.—These have been frequently visited by the Inspector, and have all been found clean and in good order.

Inspection of the Town.—Arrangements have recently been made whereby the Inspector will visit and report upon a section of the town at each meeting of the Sanitary Committee.

The town has been during the year visited by a Sub-committee as on former occasions. I think this is an excellent plan and productive of much good.

The usual visits have been made to the older portions of the town, and many sanitary defects remedied. To go over a district and see all defects put right is not sufficient as in certain parts repairs do not last for very long, and nuisances are constantly occurring which require attention.

The Ambulance.—This is in good order and is a great gain to the town, enabling patients to be removed with much greater comfort than heretofore, and rendering removal less objectionable to the sick.

I remain,

Mr. Mayor, Mr. Chairman, and Gentlemen,

Your obedient Servant,

G. R. PARKER.

20th March, 1899.

TABLE A.

Table of Deaths during the year 1898, in the Urban Sanitary District of LANCASTER, classified according to Diseases, Ages and Localities.

Names of Localities adopted for the purpose of these Statistics; public institutions being shown as separate localities. *(Columns for Population and Births are in Table B.)*	Mortality from all causes at subjoined Ages.								Mortality from subjoined causes, distinguishing Deaths of Children under Five years of age.																					
									1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
													Fevers.																	
	At all Ages.	Under 1 year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and upwards.		Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus.	Enteric or Typhoid.	Continued.	Relapsing.	Puerperal.	Cholera.	Erysipelas.	Measles.	Whooping Cough.	Diarrhœa and Dysentery.	Rheumatic Fever.	Phthisis.	Bronchitis Pneumonia & Pleurisy.	Heart Disease.		Injuries.	All other Diseases.	Total.
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)																						
The Borough	515	162	65	18	30	143	97	Under 5	...	1	...	...	...	2	...	...	...	...	...	8	12	35	...	...	52	...	...	1	118	229
								5 upwards	...	...	...	...	...	13	1	1	3	...	1	...	1	2	1	36	45	30	...	1	151	286
The County Asylum	146	..	..	..	10	111	25	Under 5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
								5 upwards	...	...	...	...	...	2	...	...	...	...	...	...	...	1	...	17	23	44	...	...	59	146
Royal Infirmary	43	3	4	4	4	25	5	Under 5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1	5	7
								5 upwards	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	6	3	4	...	7	15	36
The Workhouse	52	5	..	..	1	31	15	Under 5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	4	5
								5 upwards	...	...	...	...	...	...	...	...	...	...	...	...	...	2	1	4	11	2	...	...	27	47
Bowerham Barracks	1	1	..	..	..	..	..	Under 5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
								5 upwards	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
The Castle	..	..	..	..	..	..	..	Under 5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
								5 upwards	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
The Ripley Hospital	1	..	..	1	..	..	..	Under 5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
								5 upwards	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
Totals	758	171	69	23	45	308	142	Under 5	...	1	...	...	...	2	...	...	...	...	...	8	12	35	...	...	54	...	...	2	128	242
								5 upwards	...	...	...	...	...	16	1	1	3	...	1	...	1	5	2	63	82	80	...	8	253	516

TABLE B.

Table of Population, Births, and of New Cases of Infectious Sickness, coming to the knowledge of the Medical Officer of Health, during the year 1898, in the LANCASTER Urban Sanitary District, classified according to Diseases, Ages, and Localities.

Names of Localities adopted for the purpose of these Statistics; Public Institutions being shown as separate localities.	Population at all Ages.		Registered Births.	Aged under 5 or over 5.	New Cases of Sickness in each Locality, coming to the knowledge of the Medical Officer of Health.													Number of such cases removed from their homes in the several Localities for Treatment in Isolation Hospital.												
	Census 1891.	Estimated to middle of 1898.			1	2	3	4	5	6	7	8	9	10	11	12	13	1	2	3	4	5	6	7	8	9	10	11	12	13
									Fevers.													Fevers.								
(a)	(b)	(c)	(d)	(e)	Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus.	Enteric or Typhoid.	Continued.	Relapsing.	Puerperal.	Diarrhœa.	Erysipelas.	Measles.	Rötheln.	Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup	Typhus.	Enteric or Typhoid.	Continued.	Relapsing.	Puerperal.	Cholera.	Erysipelas.		
The Borough	28,152	36,545	1023	Under 5		3	0			4			0	158		134	3		1				1							
				5 upwards		16	5			77			3	155		73	2		10				35							
The County Asylum	1,980	1,980		Under 5						0																				
				5 upwards						4																				
The Workhouse	193	193		Under 5																										
				5 upwards						1				5		1														
The Royal Infirmary	30	30		Under 5																										
				5 upwards																										
Bowerham Barracks	297	297		Under 5												2														
				5 upwards						1																				
The Castle	61	61		Under 5																										
				5 upwards																										
The Ripley Hospital	321	321		Under 5																										
				5 upwards			1																							
Totals	31,034	39,427	1023	Under 5		3				4				158		136	3		1				1							
				5 upwards		16	6			83			3	160		74	2		10				35							

TABLE C.

COUNTY OF LANCASTER.

SUMMARY OF MEDICAL OFFICER'S REPORT FOR 1898.

URBAN SANITARY DISTRICT OF LANCASTER.

Area in Statute Acres......1,680. Population (Census) 1891......31,034.

Population, Estimated, 1898...39,427.

Name of Medical Officer of Health..............G. R. PARKER. Salary.....................£110.

Births Registered { Male.........523 / Female......500 } Total...... 1023 | Deaths Registered { Male.........255 / Female......260 } Total......515

Birth Rate	27·99.
Death Rate...	14·09.
Rate of Infant Deaths under 1 year to 1,000 births	158
Death Rate from the seven principal Zymotic Diseases, per 1,000 of population	1·95.
Diseases prevalent..	Measles.
Period	December.
What action taken ?	Disinfection.
Any schools closed ?..................................	Yes ; one.
If so, for what Disease ?	Measles.
What is the character of the Hospital Accommodation ?	Good.
Is it Joint or otherwise ?	Otherwise.
No. of Beds available for the District ?..............	About 32.
What were the Cases Treated ?	Enteric Fever and Scarlet Fever.
Deaths in Hospital	Eight.

From what Causes?	Enteric Fever.
How is Disinfection carried out?	Steam, Dry Heat, &c.
Apparatus used?	Washington-Lyons.
Is the Infectious Disease (Notification) Act in force?	No.
What is the character of House Accommodation?	Good.
Has any action been taken under "The Housing of the Working Classes Act, 1890?"	No.
Have any houses condemned as unfit for human habitation been closed or demolished? If so, how many?	No.
Is the Water Supply good and subject to your inspection?	Excellent.
Is Scavenging carried out satisfactorily?	Yes.
By Sanitary Authority or contract?	Sanitary Authority.
How is the Refuse disposed of?	Carted to a "Tip."
What is the character of Drainage and the form of Sewage Disposal?	Water carriage.
Canal Boats	In good order.
What is the condition of the Bakehouses?	Good.
Slaughter Houses?	Public Abattoir.
Lodging Houses. Are they Registered?	Yes.
Dairies, Cowsheds, and Milkshops—	
Are they periodically inspected?	Yes.
Are they subject to regulations made under the Order of the Local Government Board?	Not at present. Regulations under consideration.

Have the Factories and Workshops been inspected, and with what result?	Yes.
Food unfit for Human Consumption, amount seized?	30.
Any Special Report of Medical Officer of Health during the year?	No.
Department of Inspectors of Nuisances :—	
No. of Notices served	See Inspector's Report, which is appended.
,, Nuisances remedied	,, ,, ,,
,, Legal Proceedings taken and result	,, ,, ,,
Smoke :—	
No. of Observations	See Inspector's Report, which is appended.
,, Legal Proceedings taken and result	,, ,, ,,
What is the time limit allowed for the emission of black smoke per hour?	,, ,, ,,
Has the Authority adopted—	
(*a*) "The Infectious Disease (Prevention) Act, 1890?"	No. Private Act, 1880.
(*b*) "The Public Health Acts Amendment Act, 1890?"	Yes.

TABLE D.

Showing details of Statistics of last six years.

	1893	1894.	1895.	1896.	1897	1898
Gross population of Lancaster	33524	34631	35830	37029	38228	39427
Total deaths	756	618	750	729	726	758
Gross death-rate	22·55	17·84	20·93	19·68	18·99	19·22
Population (less 6 Institutions)......	30642	31749	32948	34147	35346	36545
Total deaths in Boro' (less 6 Institutions)	528	413	516	479	492	515
Corrected death-rate	17·23	13·00	15·66	14·02	13·91	14·09
Deaths of Males	254	202	259	254	262	255
Deaths of Females	274	211	257	225	230	260
Deaths of Infants under 1 year......	164	112	138	152	145	162
Death-rate of Infants per 1,000 registered births	166	111	147	163	151	158
Deaths of Children 1 and under 5 years	100	40	65	48	92	65
Total deaths under 5 years of age ..	264	152	203	200	237	227
Deaths of persons 5 and under 65 years	139	158	197	180	165	191
Deaths of persons over 65 years	124	103	116	99	90	97
Number of Zymotic deaths	87	27	43	40	109	81
Zymotic death-rate	2·56	·85	1·30	1·37	2·85	1·95
Number of births..................	991	1008	936	938	957	1023
Birth-rate	29·56	29·10	26·12	25·33	25·03	25·94
Births of Males	491	526	469	466	480	523
Births of Females	500	482	467	472	477	500

TABLE E.

A Table showing the number of cases of Zymotic Disease treated at home and at the Sanatorium, and comparing the results of the six years—1893, 1894, 1895, 1896, 1897, 1898.

	1893	1894	1895	1896	1897	1898
Total Cases notified	532	171	1535	183	1294	649
Total Cases treated at home	454	119	1491	139	1264	602
Recoveries (treated at home)	428	111	1467	111	1162	533
Deaths (treated at home)	26	8	24	28	102	69
Total Cases removed to Sanatorium)	78	52	44	44	30	47
Recoveries (Sanatorium)	73	49	43	44	23	39
Deaths (Sanatorium)	5	3	1	0	7	8
Sanatorium Cases treated by Medical Officer of Health	18	17	8	13	1	6
Sanatorium Cases treated by their own Medical Man	60	35	36	31	29	41
Total Recoveries	501	168	1511	155	1185	572
Total Deaths	31	11	25	28	109	77
Visits made to Sanatorium by Medical Officer of Health	131	127	83	139	24	98

TABLE F.

Showing causes of Death of Infants under one year old during the years 1894, 1895, 1896, 1897, and 1898.

	1894	1895	1896	1897	1898
Diarrhœa, Gastro-Enteritis, Cholora Infantum ..	21	35	30	30	32
Bronchitis, Pneumonia, and Pleurisy	14	21	30	21	37
Marasmus, Malnutrition, Debility, Inanition....	20	20	28	22	12
Convulsions	26	15	14	15	23
Hepatitis	..	..	..	1	..
Meningitis, Hydrocephalus, and Tubercular Meningitis	4	5	7	5	25
Measles	..	6	..	16	2
Eczema	..	..	..	1	..
Premature Birth	9	22	13	20	12
Intussusception of Bowel	1	..	..	1	1
Spina Bifida	1	..	2	1	..
Pyelitis..................................	..	..	..	1	..
Congenital Syphilis	..	1	..	1	1
Whooping Cough	3	..	8	1	8
Intestinal Colic	..	..	..	1	..
Nephritis	..	..	..	1	..
General Atrophy	..	..	..	1	..
Atelectasis	..	1	6	5	3
Various other Causes	..	..	..	..	6

By the kindness of Dr. Schloesser, I am able to give the following table, showing the total Rainfall and Mean Temperature for each month of the year 1898 :—

TABLE G.

Showing Rainfall each month.

Month.	Total rainfall in inches.	Mean temperature.
January	4·15	43·7
February	2·72	40·7
March	1·02	40·1
April	3·45	47·8
May	2·96	50·8
June	3·07	56·2
July	·43	58·5
August	6·32	60·8
September	1·86	59·2
October	4·22	52·5
November	4·43	46·4
December	3·70	44·6
Total	38·33	

INSPECTOR OF NUISANCES' ANNUAL REPORT

For the Year 1898.

To His Worship the Mayor, the Chairman, and Members of the Sanitary Committee of the Lancaster Corporation.

Mr. Mayor, Mr. Chairman, and Gentlemen,

I beg to present to you a brief report of the work of the Sanitary Department for the year 1898.

DEATH RATE.

The Death-rate in the town (not including the public institutions), from all causes was 14·14 per 1,000 of population. The death-rate in 1897 was 12·86. The following figures, taken from the Medical Officer's quarterly reports, shew the comparative death-rates in the Borough for the past five years :—

	Annual Death-rate per 1,000 of Population.					
	1894.	1895.	1896.	1897.	Average 1894-7	1898.
First Quarter	14·64	18·74	15·34	16·00	16·12	10·17
Second ,,	13·97	12·86	14·60	11·09	13·13	14·55
Third ,,	12·09	12·99	12·36	14·02	13·87	15·10
Fourth ,,	11·26	17·96	13·93	10·35	13·37	16·74
Year	13·00	15·64	14·06	12·86	13·89	14·14

INFECTIOUS DISEASES.

The number of cases of Infectious Diseases notified during the year was 649. The following figures give the comparison for the past nine years :—

	1889	1890	1891	1892	1893	1894	1895	1896	1897	1898
Diarrhœa	...	...	...	...	...	...	...	...	...	318
Diphtheria	3	1	10	20	10	7	8	7	...	6
Enteric Fever	18	41	53	40	39	47	28	64	55	88
Measles	1315	91	111	752	609	46	1405	58	1228	210
Puerperal Fever ...	1	2	2	1	2	1	1	1	...	3
Rotheln	26	11	3	11	8	3	32	14	1	5
Scarlatina	105	173	148	166	180	69	62	32	12	19
Smallpox	...	..	...	5	10	2	...	7	...	...
Total............	1468	319	327	995	858	175	1536	183	1296	649

The cases are chiefly made up of 3 diseases, *i.e.*, Diarrhœa, 318 ; Measles, 210 ; Enteric Fever, 88. Notification of Epidemic Summer Diarrhœa was, in 1898, tried perhaps more as an experiment than otherwise. It is difficult to localise the cases, as they were in every part of the town, and did not break out in any particular district. The cases, dlvided into various ages, are as follows :—

Under 5 years	163
Over 5, under 10	15
,, 10, ,, 20	18
,, 20, ,, 60	97
Over 60 years	25

The 88 cases of Enteric Fever were:—79 in 62 houses, 6 at the County Asylum, 2 at the Bowerham Barracks, and 1 at the Workhouse.

The outbreak of Measles at the end of October was traced to another town. The cases were chiefly in the Bowerham Board School, and that school was at once closed by the Sanitary Committee. At a later period, Christ Church School was also closed.

All the matters complained of in Dr. Thomson's report to the Local Government Board (*re* the last epidemic of measles) have been well looked to during the past year. The premises in all cases, except when prohibited by special circumstances, have been disinfected daily. In addition, the bedding from a large number of houses was removed to the Disinfector at the Sanatorium. The following is a list of articles so disinfected:—

Beds	79
Blankets	107
Bolster	34
Bolster Slips	34
Counterpanes	147
Mattresses	41
Pillows	137
Pillow Slips	135
Sheets	108
Wearing Apparel, &c.	15
Total	837

In addition, 4 mattresses and 1 bed were, on account of their filthy condition, destroyed by fire, instead of being disinfected.

Owing to a defect in the disinfector, many articles were injured, and compensation was paid by the Corporation. The unfortunate sequel to the injury done was that householders refused to let their bedding be taken away. The defect has fortunately been remedied.

The number of patients treated in the Sanatorium during 1898 was 46; 39 were discharged, and 7 died.

The following figures show the number of cases admitted since the year in which the Sanatorium was built (1891):—

	1891	1892	1893	1894	1895	1896	1897	1898
Diphtheria	...	2	...	...	...	...	...	...
Enteric Fever ...	27	22	8	20	12	16	23	36
Scarlatina	81	107	56	33	32	22	7	10
Smallpox	...	1	8	1	...	7	...	...
Total..... ...	108	132	72	54	44	45	30	46
No. of Deaths......	7	11	5	4	...	1	6	7

We have had no smallpox during the year, but the question of providing more suitable hospital accommodation for patients suffering from that disease has been decided, and the erection of a new hospital has been commenced.

At the latter end of the year, rules were framed and adopted for the management of the Sanatorium. With the aid of these rules, many minor matters of dispute in the past will in the future be avoided.

COMMON LODGING HOUSES.

The Common Lodging Houses have been visited regularly, and are kept, on the whole, in a satisfactory condition. The question of "insufficient accommodation" has been further considered, and a lodging house made by the Corporation in Aldcliffe Street and Henry Street, to accommodate 35 adults. That, with another addition, increases the number of registered houses from 13 to 15. The following figures (adults only), taken from the weekly returns of the lodging house keepers, show the extent of the overcrowding before the opening of the new Corporation house in October :—

Month.	Registered Accommodation.	Number of Lodgers.		
		Average.	Maximum.	Minimum
January	185	177	217	161
February	185	180	200	168
March	185	186	210	169
April	185	186	212	173
May	187	189	218	175
June	187	182	223	165
July	187	174	192	159
August	187	175	192	165
September	187	173	199	162
October	211	194	214	164
November	226	200	218	186
December	226	189	202	176

INSANITARY DWELLINGS.

We have not made much progress during the year with our insanitary areas. One case will shortly be decided by the magistrates, and as that will probably be looked upon as a test case, the action of the Committee with regard to other areas, may be influenced by the decision on the case now pending.

ASHES.

7323 cart loads and 1763 wagon loads (equalling about 9977 tons) of ashes have been removed during the year. Arrangements are being discussed *re* a Destructor, which will probably be in the course of erection within the coming year.

CANAL BOATS.

29 Canal Boats have been inspected during the year. Of that number 2 were boats registered at Lancaster, and 27 registered at Preston. The boats are kept in a very satisfactory manner. I have not met with a single case of sickness on them. There has only been one case of infringement of the Regulations, the case being a Preston boat, in which the cabin required re-painting.

THE PORT.

The question of Glasson Dock water supply has, since my last report, been decided for the time being, as far as the shipping is concerned, water being taken in tanks to Glasson. 70 vessels have been visited (52 at Glasson and 18 at Lancaster). Of that number, 58 were British and 12 Foreign.

SLAUGHTER HOUSES.

The Corporation Slaughter Houses have been regularly visited, and are kept in a very satisfactory condition. The irregularities which have occurred have been trivial, and were not of sufficient importance to report to the Committee. The number of animals slaughtered for food during the year was as follows:—

	Total. 1898.	Average Per Week. 1898.	Total, 1897.
Beasts	2,743	53	2,579
Calves	418	8	469
Sheep	13,848	266	13,106
Pigs	1,196	23	1,177
Total	18,205	350	17,331

UNSOUND FOOD.

We have not been troubled very much during the year with unsound food. The chief trouble has been tuberculosis, but the case were none of them so serious as to make magisterial proceeding necessary. The number of cases dealt with is as follows :—

Beasts	21
Sheep	1
Fish	4
Miscellaneous	4
Total	30

The cases were dealt with in the following manner :—

Condemned and destroyed	18
Passed for food	1
Part passed and part condemned	11
Total	30

URINALS.

The public urinals are regularly cleansed, and are in good condition A suitable site has not yet been found in which to fix the urinal which was removed from Stone Well. If we could have more conveniences there would be fewer cases of nuisances in the entrances to yards and courts.

VANS.

6 Hawkers' Vans have been visited. In one or two cases they have been overcrowded, but there have been no cases of sickness.

The following schedule gives in brief the details of the cases attended to during the year :—

Accumulation and Deposit of Offensive Matter	19
Ashpits not in accordance with requirements	42
Bakehouses visited from time to time	44
Bedrooms over Ashpits	1
Canal Boats visited	29
Canal Boat Infringements	1
Chipped Potato and Fried Fish Shops visited from time to time	26

Common Lodging Houses visited from time to time	15
do. do. Inspected for Registration	6
do. do. Registered	4
do. do. Not Registered	2
do. do. Infringement of Bye-laws	—
Common Privies not Satisfactory	3
Dangerous Buildings, Chimney Stacks, Walls, &c.	14
do. Cellar Doors, &c., on Footpaths	24
Drains Defective	141
do. Tested and found Satisfactory	12
Factories and Workshops Inspected (*re* overcrowding, &c.)	34
Filthy Premises	3
Houses unfit for Human Habitation	7
Infectious Diseases	649
Manure Pits not in accordance with requirements	11
Miscellaneous cases	44
Overcrowded Dwellings, &c.	20
Pavement in Yards, &c., bad	13
Pigs kept contrary to Bye-laws	2
Premises without sufficient w.c. accommodation	12
Smoke Nuisance	9
Spouts defective	82
Stagnant Water in Cellars, &c.	37
Unsound Food	30
Vans (Hawkers') visited	6
Vessels visited (Port of Lancaster)	70
Waste Pipes defective	10
Waste Pipes connected with Drain	8
Water Closets defective	209
Water Pipes and Supply defective	33
Total number of cases	1,672

I remain, Gentlemen,

Your obedient Servant,

FRED. W. SMITH,

ASSOC. SAN. INST.,

Inspector of Nuisances.

Sanitary Office,

Lancaster, February, 1899.

To the Chairman and Members of the Lancaster Urban Sanitary Authority.

Mr. Chairman and Gentlemen,

I beg to present to you my Report for the quarter ending March 31st, 1898.

Total deaths occurring in the Borough of Lancaster during this quarter numbered 156, equal to an annual death-rate of 15·82 per 1,000 of population.

During the corresponding quarter of last year the deaths numbered 223, and the annual death-rate was 23·33 per 1,000 of population.

The deaths in the Borough of Lancaster (excluding the six Institutions) numbered 93, equal to an annual death-rate of 10·17 per 1,000 of population.

Last year during the corresponding quarter there were 153 such deaths, equal to an annual death-rate of 16·00 per 1,000 of population.

Of the 93 deaths occurring in the Borough of Lancaster, 42 were those of males, and 51 those of females; 36 occurred in children under five years of age, and 57 in persons over that age.

Deaths in the County Lunatic Asylum numbered 37; in the Union Workhouse, 16; in the Royal Infirmary, 10; and none in the other three Institutions.

Deaths from the seven principal zymotic diseases during the past quarter numbered 9, viz.:—Measles, 1; Enteric Fever, 6: Scarlet Fever, 1; and Relapsing Fever, 1—equal to an annual zymotic death-rate of ·91 per 1,000 of population.

During the corresponding quarter of last year there were 50 such deaths, namely:—Measles, 43; Enteric Fever, 4; Scarlatina, 1; Whooping Cough, 1; and Diphtheria, 1—equal to an annual zymotic death-rate of 5·23 per 1,000 of population.

33 cases of infectious diseases have been reported during the last quarter, namely:—

Scarlatina	4
Enteric Fever	21
Measles	5
Rotheln	2
Puerperal Fever	1
Total	33

During the corresponding quarter of 1897 there were 980 cases eported, namely :—

Scarlatina	3
Enteric Fever	15
Measles	961
Rotheln	1
	980

Births registered in the Borough during this quarter were 286, comprised of 141 males and 145 females, equal to an annual birth-rate of 29·01 per 1,000 of population.

In the corresponding quarter of 1897 there were 253 births (118 males and 135 females), equal to an annual birth-rate of 26·47 per 1,000 of population.

I remain,
Mr. Chairman and Gentlemen,
Your obedient servant,
April 16*th*, 1898. G. R. PARKER.

To the Chairman and Members of the Lancaster Urban Sanitary Authority.

Mr. Chairman and Gentlemen,—

I beg to present to you my Report for the quarter ending June 30th, 1898.

Total deaths occurring in the Borough of Lancaster during this quarter were 211, equal to a gross annual death-rate of 21·40 per 1,000 of population.

During the corresponding quarter of last year the deaths numbered 154, equal to a gross annual death-rate of 16·11 per 1000 of population.

The deaths in the Borough of Lancaster (excluding the six Institutions) number 133, equal to an annual corrected death-rate of 14·55 per 1,000 of population.

Of these 133 deaths, 76 were those of males and 57 those of females. Forty-one occurred in children under 5 years of age, and 92 in persons over that age.

During the corresponding quarter of last year these deaths numbered 106, equal to an annual death-rate of 11·99 per 1,000 of population.

Deaths in the County Asylum, 57; in the Union Workhouse, 12; in the Royal Infirmary, 9.

Deaths from the seven zymotic diseases, 8, viz.:—Enteric Fever, 5; Whooping Cough, 1; Diarrhœa, 1; and Continued Fever, 1; equal to an annual zymotic death-rate of ·81 per 1,000 of population.

During the corresponding quarter of 1897 these deaths numbered 10, viz.:—Enteric Fever, 2; Measles, 6; Whooping Cough, 1; and Diarrhœa, 1; equal to an annual zymotic death-rate of 1·04 per 1,000 of population.

Forty-eight cases of infectious disease have been reported to me this quarter, viz.:—5 Scarlet Fever, 2 Rotheln, 1 Diphtheria, 19 Enteric Fever, and 21 Measles.

Births registered in the Borough during the quarter ending June 30th, 1898, 257, comprised of 139 males and 118 females, and equal to an annual birth-rate of 26·07 per 1,000 of population.

In the corresponding quarter of 1897 there were 240 births—118 males and 122 females—equal to an annual birth-rate of 25·11 per 1,000 of population.

I remain,

Mr. Chairman and Gentlemen,

Your obedient Servant,

G. R. PARKER,

Medical Officer of Health.

To the Sanitary Authority of the Borough of Lancaster.

MR. MAYOR, MR. CHAIRMAN, AND GENTLEMEN,—

I beg to present to you my Report for the quarter ending September 30th, 1898.

Total deaths occurring in the Borough of Lancaster during this quarter numbered 196, equal to an annual death-rate of 19·88 per 1,000 of population.

During the corresponding quarter of last year the deaths numbered 190, and the annual death-rate was 19·88 per 1,000 of population—just the same rate as this quarter.

The deaths in the Borough of Lancaster (excluding the six Institutions) number 138, equal to an annual corrected death-rate of 15·10 per 1,000 of population.

Of these 138 deaths, 66 were those of males and 72 those of females. Sixty-eight were under 5 years of age, and 70 were over that age.

During the corresponding quarter of last year, the deaths (exclusive of the six Institutions) were 134, equal to an annual corrected death-rate of 15·16 per 1,000 of population.

Deaths in the County Asylum, 30: in the Royal Infirmary, 13; in the Workhouse, 14; and in the Barracks, 1.

Forty-three deaths from zymotic diseases have been reported to me during the past quarter, viz.:—Diarrhœa, 34; Enteric Fever, 3; Measles, 1; Whooping Cough, 1; and Puerperal Fever, 3; equal to an annual zymotic death-rate of 4·36 per 1,000 of population.

During the corresponding quarter of 1897, the deaths from the seven principal zymotic diseases numbered 35, viz.:—Measles, 4; Diarrhœa, 28; Scarlet Fever, 1; and Enteric Fever, 2; equal to an annual zymotic death-rate of 3·66 per 1,000 of population.

369 cases of infectious diseases have been reported to me during the past quarter, namely:—

Scarlet Fever	5
Enteric Fever	22
Puerperal Fever	2
Measles	22
Diarrhœa	318
	369

During the corresponding quarter of 1897, 95 cases of infectious disease were reported, namely:—Scarlet Fever, 4; Measles, 75; and Enteric Fever, 16.

Births registered in the Borough during the past quarter were 240 (114 males and 126 females), equal to an annual birth-rate of 25·84 per 1,000 of population.

In the corresponding quarter of 1897, there were 247 births (124 males and 123 females), equal to an annual birth-rate of 24·35 per 1,000 of population.

I remain,
Mr. Mayor, Mr. Chairman, and Gentlemen,
Your obedient Servant,
October 22nd, 1899. G. R. PARKER.

To the Urban Sanitory Authority of the Borough of Lancaster.

Mr. Mayor, Mr. Chairman and Gentlemen,

I beg to present to you my Report for the quarter ending December 31st, 1898.

Total deaths occurring in the Borough of Lancaster during this quarter, 195, equal to a gross annual death-rate of 19-78 per 1,000 of population.

During the corresponding period of last year the deaths numbered 159, equal to gross annual death-rate of 16·63 per 1,000 of population.

The deaths in the Borough of Lancaster for the same period (excluding the six prinicipal Institutions) numbered 153, equal to an annual corrected death-rate of 16·74 per 1,0co of population.

During the corresponding quarter of last year these deaths numbered 99, equal to an annual corrected death-rate of 11·20 per 1,000 of population.

Of these 153 deaths, 72 were those of males, and 81 were those of females. 82 occurred in children under 5 years of age, and 71 in persons over that age.

Deaths in the County Lunatic Asylum, 22 ; in the Workhouse, 9 ; in the Royal Infirmary, 10 ; in Ripley's Hospital, 1. Total 42

Deaths from the principal zymotic diseases, 24, viz.—

Diarrhœa	4
Whooping Cough	10
Enteric Fever	4
Measles	6
	24

equal to an annual zymotic death-rate of 2·43 per 1,000 of population.

During the corresponding period of last year there were 10 such deaths, viz. :—Enteric Fever 6, Diarrhœa 3, and Measles 1 ; equal to an annual zymotic death-rate of 1·04 per 1,000 of population.

193 cases of infectious disease have been reported to me during the past quarter, viz. :—

Scarlatina	5
Diptheria	5
Enteric Fever	21
Measles	161
Rotheln	1
	193

Births registered in the Borough during the last quarter number 240—129 were those of males and 111 those of females, equal to an annual birth-rate of 24-35 per 1,000 of the population.

In the corresponding quarter of 1897, the births of 217 children were registered—120 were those of males, and 97 those of females, equal to an annual birth-rate of 22·70 per 1,000 of population.

I remain,

Mr. Mayor, Mr. Chairman, and Gentlemen,

Your obedient servant,

G. R. PARKER.

January 14th, 1899.

PORT OF LANCASTER.

ANNUAL REPORT

OF

Medical Officer

OF HEALTH.

TO THE MAYOR, ALDERMEN, AND BURGESSES OF THE BOROUGH OF
LANCASTER, BEING THE SANITARY AUTHORITY OF THE PORT
OF LANCASTER.

MR. MAYOR, MR. CHAIRMAN AND GENTLEMEN,

I again estimate the marine population of the Port of Lancaster to be about 63.

To Captain Russell I once more tender my thanks for supplying the details of the statistics which by his courtesy I am enabled to present to you for the year 1898.

The total number of trading vessels entering the Port during the year 1898 was 185, having a total tonnage of 39,905 tons, and crews amounting to about 1,400.

Of these 185 vessels 133 were engaged in the home trade and 52 in the foreign trade.

Of the 133 home trade vessels all were British, the total tonnage was 15,021 tons, with about 630 hands principally British, on board.

The following table shows the number of home trade vessels arriving at the Port during the past ten years, with their total tonnage and total hands :—

Year.	No. of Vessels	Tonnage.	Hands.
1889	234	23476	1102
1890	246	24208	980
1891	171	16612	684
1892	129	13307	855
1893	128	13727	640
1894	127	19297	605
1895	124	13583	607
1896	174	17334	800
1897	179	16213	850
1898	133	15021	630

Of the vessels engaged in the foreign trade 42 were of British nationality and 10 were foreign. Their total tonnage was 24,884 having on board about 770 hands.

The following table shows the number of foreign trade vessels entering the Port during the last 10 years, with their total tonnage and total hands:—

Year.	No. of Vessels	Tonnage.	Hands.
1889	38	13,074	338
1890	42	12,046	377
1891	36	11,094	331
1892	38	11,232	380
1893	23	7,742	236
1894	16	4,894	136
1895	21	6,214	228
1896	34	13,675	453
1897	24	8,939	327
1898	52	24,884	770

It will be seen that whilst the home trade vessels have decreased in every way, there has been a development of the foreign trade, which has more than doubled itself in the past year.

During the past year, whenever required, water has been conveyed to the vessels from Lancaster in a tank cart.

This has proved a satisfactory solution of the water question as far as the vessels are concerned.

The Inspector has made 70 visits, and there has been no nuisance discovered.

I have not heard of any cases of illness amongst the men during the year.

I remain

Mr. Mayor, Mr. Chairman, and Gentlemen,

Your obedient Servant,

G. R. PARKER,

Medical Officer of Health.

March 20*th*, 1899.

LANCASTER

RURAL DISTRICT COUNCIL.

MEDICAL OFFICER'S

Annual Report

FOR

1898.

LANCASTER:
Printed by Eaton and Bulfield, King Street.

1899

REPORT.

To the Chairman and Members of the Lancaster Rural District Council.

Mr. Chairman and Gentlemen,

With the completion of the year 1898, it again becomes my duty to furnish you with an Annual Report upon the Sanitary state of the District.

Population.—I estimate the population of the District at the middle of the year 1898, to have been 12924, made up as follows :—

Lancaster Sub-district	3815
Heaton Sub-district	1745
Warton Sub-district	3652
Ellel Sub-district	3712
	12924

I have found it necessary to add 300 to the estimate for Heaton, which is as near as I can come to the temporary population of the Sub district.

The population of the Lancaster Sub-district shows an increase, but that of Wharton and Ellel both show slight annual decreases.

DEATH RATE.—In the whole district in 1898 there were 193 deaths registered, 102 being those of males, and 91 those of females. 67 were under 5 years of age, and 126 over. The annual death rate, from all causes, for 1898 is 14·93, a decrease of 1·68 upon the death rate for 1897.

The deaths for the whole district in 1898, exclusive of those which occurred in the Royal Albert Asylum, were 183 in number, equal to an annual corrected death rate of 14·15 per 1000 of population. The corrected death rate for 1897, was 16·60 per 1000 of population. There is, therefore, a decrease both in the gross and corrected death rates.

In the Royal Albert Asylum in 1898 there were 10 deaths, as compared with 11 in 1897.

ZYMOTIC DEATH RATE.—The deaths from the seven principal zymotic diseases in 1898 numbered 14, namely :—

Scarlet Fever	1
Diarrhœa	6
Enteric Fever	3
Puerperal Fever	2
Diphtheria	1
Whooping Cough	1
	14

equal to an annual zymotic death rate for the whole district in 1898 of 1·08 per 1000 of population.

During 1897 the following zymotic deaths occurred :—

Diarrhœa	5
Enteric Fever	6
Whooping Cough	1
Puerperal Fever	1
Measles	5
	18

equal to an annual zymotic death rate for the whole district in 1897 of 1·43 per 1000 of population.

SMALLPOX.—In spite of the large floating population in Heaton, no case of this disease has been reported to me in any portion of the district during 1898. A similar happy state of affairs existed in 1897.

The great event of the year has been the new Vaccination Act. This act has revolutionised the whole system of public vaccination. By the substitution of domicillary visits by the public vaccinator, in lieu of the attendance of the children at fixed stations, an attempt has been made to secure more efficient vaccination by lessening the labour of the parents and guardians of the infants. Arm to arm vaccination has also been abolished, and in its stead, all public vaccinations have to be performed with Glycerinated Calf Lymph, which may be obtained by Public Vaccinators from the Vaccine Department of the Local Government Board.

I regret to notice that no provision is made in the act for bringing the standard of private vaccination up to the level of that demanded by the Local Government Board, by putting a stop to the practice of making one or two insertions only. This, to some extent, handicaps the public vaccinator, who is expected to make four insertions, leaving a scar area of the size of half-a-crown. The subject of conscientious objection is one upon which I need not here enter—it is the law, and we must obey its ruling.

SCARLET FEVER.—This year a death from this disease has been registered, equal to an annual death rate from this cause of ·07 per 1000 of population.

This is the first death from this disease recorded in four years.

PUERPERAL FEVER.—Two deaths from this cause have been registered in 1898, equal to an annual puerperal death rate of ·15 per 1000 of population.

MEASLES.—No deaths have been recorded from this disease in 1898 although the portion of the Lancaster Sub-district, adjacent to Lancaster, has been affected, as well as the Sub-district of Heaton.

The numbers of cases are as follows :—

Lancaster Sub-district	14
Heaton Sub-district	11
Warton Sub-district	2
Ellel Sub-district	3
	30

Now that the office of Sanitary Inspector has been separated from that of Surveyor, I trust that more attention will be paid to the notified cases of infectious disease.

The question of school-closure, on account of this disease, has not required consideration this year, but I may say, in answer to those who do not believe in the efficacy of such measures, that it is in rural districts that the greatest benefit is obtained from preventing the aggregation of school children together. There is no reasonable doubt that in this part of the country the greatest spread of the disease is caused by the attendance of children at school, and the thoughtless habit of parents in taking their children into houses where the disease already exists.

DIARRHŒA —Six deaths from this cause occurred in the whole district in 1898. Four occurred in the Lancaster Sub-district, and one each in Heaton and Ellel Sub-districts.

I venture to hope that, in future, more care will be taken by the medical attendant to state clearly on his certificate of death the nature of the diarrhœa, so as to distinguish whether the character of the disease is zymotic or not.

As the disease, when zymotic, occurs principally in the months of July, August, and September, when the ground temperature rises to its highest, I have given here a table to show when such deaths occurred.

DEATHS FROM DIARRHŒA.

Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
			1				1	3	1			6

These six deaths from diarrhœa are equal to an annual death rate from that cause of ·46 per 1000 of population. The seven deaths from this cause in 1897 were equal to an annual death rate of ·55 per 1000 of population.

Diphtheria.—Although only one case of this disease has been notified in 1898, as it proved fatal, the result is worse than in the year 1897, when two cases were notified, and both recovered. In my last report, I mentioned the connection of outbreaks of this disease with accumulations of filth in near proximity to dwellings. I have noticed no general improvement in the matter; in fact, things are exactly in the same state as they were, and are as though no note of warning had ever been sounded.

Whooping Cough.—Again, I am able to put on record a light death rate from this disease. One death only has been registered as from this cause. The death occurred in Heaton Sub-district, but whooping cough has been prevalent all over the district during the year. Little, or no notice is usually taken of this disease, although it is responsible for many deaths; sometimes immediate, but often remote. In some cases much ill-health is caused; the effects of the malady persisting for years, nay, sometimes for a life time.

Phthisis.—At the present time, there is a great outcry against the destruction of life caused by this disease, For some years the evidence in favour of its infectious character has been accumulating, and, in view of the active interest which is being taken in the National crusade against this disease, I propose to enter into the matter somewhat more fully.

There are two principal causes for phthisis—the one a predisposing, and the other an active cause.

The predisposing cause is an individual weakness which prevents the organism repelling the attacks of the microbe of the disease. This weakness may be either inherited or acquired. It may be acquired by intemperance, or as the result of an attack of acute disease, or by living amongst insanitary surroundings ; indeed, any cause which lowers the vitality of the system is a predisposing cause of the disease.

The active cause is the taking into the system of the bacillus of the disease. This may be done in two chief ways—

(1) The breathing into the system of dust which has been contaminated by the expectoration of a person suffering from the disease, or

(2) By the ingestion of meat or milk derived from tuberculous cattle.

At the present time there is no system of inspection of meat in this district, and no registered slaughter house. Every man does that which seems right in his own eyes ; but this does not always contribute to the longevity of his neighbours and customers.

The cattle of this neighbourhood are highly tuberculous, and some system of inspecting the carcases should be adopted.

Of course, the milk is even more liable to convey the disease, for tuberculous udder disease is frequently difficult to detect, and the milk is consumed raw. The immediate remedy is, of course, to sterilise all milk—every drop should be so treated.

The other remedy is, by means of the tuberculin test, to sort your cattle, and breed only from those which do not re-act to the test. The male parent should be of more mature age than is usually the case. To obtain animals of strong constitutions—constitutions which are capable of resisting disease—cattle should not be bred from an immature parent, neither should they be too closely related, Another point is that the male parent gets too little fresh air and exercise. Formerly the bull was allowed a bull coppy to run in—now-a-days, it is considered to render him too fierce and unmanageable—consequently, he is shut up in a dirty, dark hull, at the expense of his constitution, to render him more docile. The sanitary condition of these hulls is seldom attended to, all that is done is to remove the soiled bedding when it becomes too offensive, the sodden soil between the paving stones remaining, and becoming more and more contaminated as time goes on.

Deaths from phthisis and other tuberculous diseases are responsible for one death in every eight. As 552040 deaths occurred in England and Wales in 1898, it follows that there were 69000 due to phthisis and other forms of tuberculous disease. Public sentiment has been aroused to the terrible nature of this scourge, and attempts are being made to educate the public in the matter, and to show them how this sad result may be avoided.

During 1898 there were, in the district of this authority, eleven deaths registered as due to phthisis, against six deaths in 1897. These eleven deaths are equal to an annual phthisical death rate of ·85 per 1000 of population.

BRONCHITIS PNEUMONIA AND PLEURISY.—In 1898 24 deaths were registered as due to these causes, equal to an annual respiratory death rate of 1·85 per 1000 of population.

In 1897 there were 38 such death, equal to an annual respiratory death rate of 3·03 per 1000 of population.

Of the 24 deaths, 14 occurred in children under the age of five years, and 10 in persons over that age.

INFLUENZA.—Six deaths have been registeret as due to this cause in 1898 in this district, equal to an annual death rate of .46 per 1000 of population.

I am glad to report that although this disease is still with us, the type is much less severe than formerly.

HEART DISEASE.—Seventeen deaths were in 1898 registered in the district of this authority, equal to an annual death rate from this cause of 1·31 per 1000 of population.

In 1897 there were 26 such deaths, equal to an annual death rate from this cause of 1·83 per 1000 of population.

INJURIES.—In the year 1898 there have been six deaths from injuries, equal to an annual death rate from this cause of ·46 per 1000 of population.

INFANTILE DEATH RATE.—The 51 deaths of infants under one year, registered in the district during 1898, are equal to an annual infantile death rate of 131 per 1000 registered births.

In 1897 there were 44 such deaths, and the annual infantile death rate was 119 per 1000 registered births.

I have, as is my annual custom, arranged these deaths as regards their causes. The result will be found in table E.

Again, I have to record an increase in these deaths—the number in 1898 being greater than in any year since 1893.

It is a very lamentable state of affairs when more than 13 p c. of children born die before reaching the age of 12 months. There is, in my opinion, no comfort to be derived from the fact that the figures show a lower death rate than the average. It is not creditable to parents of the present day that such a high percentage of deaths should occur, and it is the more to be deplored when one considers that it is, in a large degree, preventible, being, in many cases, due to the careless exposure of the children, inefficiently clothed, and often improperly fed. At other times the children are wilfully taken within the range of infection when such complaints as measles and whooping cough are rife, with the direct object of the children contracting the disease.

The following table shows the number of these deaths in the last nine years :—

Year.	Population.	No. of Deaths under one year.	Infantile Death rate to 1000 births
1890	14699	41	105
1891	14531	48	122
1892	14837	40	98
1893	14824	73	176
1894	14791	38	94
1895	12303	30	101
1896	12410	36	105
1897	12517	44	119
1898	12924	51	131

Notification of Infectious Disease.—82 cases of infectious disease were reported to me in 1898, as against 419 in 1897.

I am still of opinion that many of the slighter attacks of infectious disease escape notification. This is, I think, largely due to carelessness, and what is not due to that is probably the result of ignorance. Persons in the country do not call in a medical man as readily as those residing in a town, the cause of which is probably in some cases largely a question of expense, although, at the same time, people living in the country are of more robust constitution, and slight illnesses, whether infectious or otherwise, do not seem to affect them as powerfully as they would those living in crowded communities.

The following tables show the cases notified from each Sub-district this year and last :—

1898.	Continued Fever.	Scarlet Fever.	Diphtheria.	Enteric Eever.	Erysipelas.	Measles.	Puerperal Fever.	Totals.
Lancaster Sub-district		5		11	1	14		31
Heaton Sub-district	1	8		10	2	12		33
Warton Sub-district			1	1	3	2		7
Ellel Sub-district				6	1	3	1	11
Totals	1	13	1	28	7	31	1	82

For 1897, the localities and diseases were as follows :—

1897.	Scarlet Fever.	Diphtheria.	Enteric Fever.	Erysipelas.	Measles.	Rothelm.	Puerperal Fever.	Total.
Lancaster Sub-district			17	1	106			124
Heaton Sub-district	6		7	2	4		1	20
Warton Sub-district		1	1	4	6	32		44
Ellel Sub-district	9	1	7	2	211		1	231
Totals	15	2	32	9	327	32	2	419

	Notified Cases.	No. of Deaths.	Death Rate per 1000 of Population.
Lancaster Sub-district	31	7	1·08
Heaton Sub-district	33	3	1·71
Warton Sub-district	7	1	·27
Ellel Sub-district	11	3	·80
District Totals	82	14	3·86

Births.—During the year 1898 there have been 387 births in the district, comprised of 191 males, and 196 females, equal to an annual birth rate of 29.94 per 1000 of population. 369 births were registered in 1897, of which 217 were those of males, and 152 those of females, making an annual birth rate for that year of 29·47 per 1000 of population.

The following table shows the number of births in each Sub-district in 1898, distinguishing males and females, and giving the birth rate :—

BIRTHS IN 1898.

	Males.	Females.	Total No.	Birth Rate per 1000 population.
Lancaster Sub-district	54	56	110	28·83
Heaton Sub-district	28	40	68	38·96
Warton Sub-district	57	52	109	29·84
Ellel Sub-district	52	48	100	26·93
District Total	191	196	387	29·94

LANCASTER SUB-DISTRICT.

During 1898, 67 deaths were registered in this Sub-district, equal to an annual death rate of 17·56 per 1000 of population.

10 of these 67 deaths occurred in the Royal Albert Asylum. Deducting these, a death rate of 14·94 per 1000 of population is obtained, which represents the true death rate of the Sub-district.

In 1897 the gross deaths numbered 59, equal to an annual death rate of 15·98 per 1000 of population. The corrected number of deaths for 1897 was 48, equal to an annual corrected death rate of 15·81 per 1000 of population.

The deaths from the seven principal zymotic diseases in 1898 were—

Enteric Fever	1
Diarrhœa	4
Scarlet Fever	1
Puerperal Fever	1
	7

equal to an annual zymotic death rate of 1·83 per 1000 of population.

12 deaths from the seven principal zymotic diseases were registered in 1897, namely :—

Enteric Fever	4
Diarrhœa	5
Measles	3
	12

equal to an annual zymotic death rate of 3·25 per 1000 of population.

The deaths of infants under one year numbered 19, equal to an annual infantile death rate of 172 per 1000 registered births.

In 1897 there were 12 such deaths, equal to an annual infantile death rate of 120 per 1000 registered births.

The births of 110 infants—54 males, and 56 females—occurred in the Sub-district in 1898, equal to an annual birth rate of 28·83 per 1000 of population.

In 1897 there were 114 births—66 males, and 48 females—equal to an annual birth rate of 30·88 per 1000 of population.

HEATON SUB-DISTRICT.

Deaths occurring in this Sub-district during 1898 numbered 35, equal to an annual death rate of 20·05 per 1000 of population.

In 1897 there were also 35 deaths, which, on account of the less estimated population, were equal to an annual death rate of 24·40 per 1000 of population.

The deaths from the seven principal zymotic diseases numbered three, namely :—

Enteric Fever	1
Diarrhœa	1
Whooping Cough	1
	3

equal to an annual zymotic death rate of 1·71 per 1000 of population.

In 1897 there were only two deaths of this class, namely :—

Enteric Fever	1
Puerperal Fever	1
	2

equal to an annual zymotic death rate of 1·30 per 1000 of population.

The deaths of infants under one year numbered 11, equal to an annual infantile death rate of 161 per 1000 registered births.

In 1897 these deaths numbered 6 only, but owing to the small number of births, the infantile death rate was 200 per 1000 registered births.

Births during 1898 numbered 68—28 males, and 40 females—equal to an annual birth rate of 38·96 per 1000 of population.

There were 30 births only in 1897—19 males and 11 females—equal to an annual birth rate of 20·90 per 1000 of population.

WARTON SUB-DISTRICT.

The deaths of 49 persons were registered in this Sub-district in 1898, equal to an annual death rate of 13·41 per 1000 of population. Of these 49 deaths, 25 were those of males, and 24 those of females.

In 1897 there were 64 deaths, equal to an annual death rate of 17·40 per 1000 of population.

The seven principal zymotic diseases were represented by one death only. This was from diphtheria, and is equal to an annual death rate of ·27 per 1000 of population.

In 1897 there were two zymotic deaths—one from Enteric Fever, and one from Diarrhœa—equal to an annual zymotic death rate of ·54 per 1000 of population.

The deaths of children under one year old numbered 10, equal to an annual infantile death rate of 91 per 1000 registered births.

There were 13 such deaths in 1897, equal to an annual infantile death rate of 122 per 1000 registered births.

Births registered during 1898 were 109 in number—57 males, and 52 females—equal to an annual birth rate of 29·84 per 1000 of population.

Births registered in 1897 numbered 106—55 males, and 51 females—equal to an annual birth rate of 28·82 per 1000 registered births.

ELLEL SUB-DISTRICT.

In 1898 there were 42 deaths registered in this Sub-district, equal to an annual death rate of 11·31 per 1000 of population. Of these 42 deaths, 19 were those of males, and 23 those of females.

In 1897 there were 50 deaths registered, equal to an annual death rate of 13·46 per 1000 of population

Deaths from the seven principal zymotic diseases numbered three, namely :—

Enteric Fever	1
Diarrhœa	1
Puerperal Fever	1
	3

equal to an annual zymotic death rate of ·80 per 1000 of population.

In 1897 there were also three zymotic deaths :—

Enteric Fever	1
Diarrhœa	1
Puerperal Fever	1
	3

equal to an annual zymotic death rate of ·80 per 1000 of population.

The deaths of 11 infants under one year old were registered, equal to an annual infantile death rate of 110 per 1000 registered births.

In 1897 there were 13 such deaths, equal to an annual infantile death rate of 109 per 1000 registered births.

Births in 1898 numbered 100—52 were males, and 48 females, equal to an annual birth rate of 26·93 per 1000 of population.

In 1897 there were 119 births—77 males, and 42 females—equal to an annual birth rate of 30·04 per 1000 of population.

I am happy to inform the Authority that there has been during 1898 a reduction in the annual death rate, bringing it below the average of the past six years. There is also a substantial reduction in the annual zymotic death rate, whilst the birth rate is higher than for some years past. On the other hand, the infantile death rate is higher.

The following table gives a comparative view of the principal statistical figures for the past six years :—

Year.	Deaths.	Death Rate.	Zymotic Deaths.	Zymotic Death Rate.	Infantile Deaths	Infantile Death Rate per 1000 births.	Births.	Birth Rate.
1893	254	17·13	34	2·29	73	176	414	27·92
1894	217	15·35	12	·74	38	94	402	27·11
1895	168	13·65	12	·97	30	101	297	24·14
1896	172	13·86	19	1·53	36	105	341	27·47
1897	197	16·60	18	1·43	44	119	369	29·47
1898	183	14·15	14	1·08	51	131	387	29·94

Of the four Sub-districts into which the district of this Authority is divided, the worst position is again held by Heaton as in the past three years, and this applies even to the number of notifications of infectious disease.

I have arranged the death rate of each Sub district for the last six years in the following table for facility of comparison.

Names of Sub-districts.	1893.	1894.	1895.	1896.	1897.	1898.
Lancaster	23·40	18·23	19·45	16·82	15·98	17·56
Lancaster without R.A.A..	21·43	13·65	15·78	14·42	15·81	14·94
Heaton	15·83	18·57	16·28	21·08	24·40	20·05
Warton	18·24	16·92	13·94	13·49	17·40	13·41
Ellel.............................	15·60	12·63	13·17	13·45	13·17	11·31

Again, I give you a table showing the births, deaths of infants under one year, and the rate such deaths bear to 1000 births in each Sub-district for the last three years.

1898.	Lancaster	Heaton.	Warton.	Ellel.
Births	110	68	109	100
Deaths under one year............	19	11	10	11
Death Rate per 1000 births......	172	161	91	110
1897.				
Births	114	30	106	119
Deaths under one year	12	6	13	13
Death Rate per 1000 births ...	105	200	122	109
1896.				
Births	108	46	93	94
Deaths under one year.....	13	6	9	8
Death Rate per 1000 births......	120	130	96	103

The district of the Lancaster Rural Sanitary Authority is again threatened with disruption.

The parish of Heysham is wishful to detach itself from the rest of the district, and is seeking to become a separate Urban Authority.

At the same time, the Corporation of Lancaster is desirous of annexing the parishes of Skerton, Scotforth, and Bulk.

Application has been made in one case to the County Council, and in the other to the Local Government Board, for sanction.

If these applications should succeed, they will seriously diminish the Authorities' district, both in area and population, especially the latter, and will leave a district more than ever agricultural in character.

A meeting of neighbouring Authorities was last year held with a view of coming to some agreement with regard to the provision of a Joint Infectious Disease Hospital. The divergent views of the individual representatives quite precluded any agreement on the subject, and the attempt was a failure. The close of the year 1898 leaving matters exactly as they were at its commencement.

The question of providing assistance to the Surveyor and Inspector of Nuisances was in 1897 considered and deferred until the time for the annual appointment of this officer.. The lamented death of Mr. Jowitt, however, precipitated matters, and the duties were divided, Mr. Langley being appointed Inspector of Nuisances, and Mr. William Dixon, Surveyor.

I here wish to record my appreciation of the manner in which Mr. Jowitt at all times conducted the business of the Authority, and my deep regret at the loss of a most careful and conscientious fellow worker.

A report should have been presented during the year upon the water supply of Thurnham and Cockerham by the Medical Officer of Health and the Surveyor.

The inspection was just completed, with the exception ot five houses, when the Surveyor's fatal illness interupted the work. It has not yet been finished, but during the coming summer I intend to go over the district again with Mr. Dixon, the new Surveyor, and present the report as early as possible.

No attempt has yet been made to provide a portable steam disinfector, the matter remains precisely where it was at the commencement of the year.

The extension of the water supply of Galgate into the houses has only been effected in a few instances. The great majority of the householders have still to carry water either from the stand pipes, or from the pumps.

I consider this the cause of the unsatisfactory state of the sewers in Galgate, which have, during the past year, constantly needed attention. The filter, which was provided in 1897, has been cleaned out and re-filled, consequently, the water is much cleaner than formerly. I would suggest that a monthly analysis of this water be carried out, as it is urgently required—the nature of the gathering ground rendering pollution quite probable during wet weather. The position of the reservoir is such that in wet weather, road-washings can and do gain access to it. The roots of the neighbouring trees also are sure to, sooner or later, cause the reservoir to leak. The capacity of the reservoir has been increased by placing a plank upon the by wash.

During 1898, the drainage scheme for Heysham has been carried out. Many of the house drains have been connected up to the sewers, and this part of the work is still going on.

With regard to the water supply, which is like that of Morecambe, to be obtained from Lancaster, the work is not yet completed.

The Lancaster Corporation have commenced their portion of the work, which consists in laying the pipes as far as the Midland Railway Bridge at Scale Hall ; and the Lancaster Rural District Council have contracted for the pipes required to carry the water on to Heysham, so that they will be able to go on with the work as soon as the Lancaster Corporation have finished. The work will, no doubt, be completed in 1899.

SCAVENGING AND REMOVAL OF REFUSE.—This work is done by contract in Galgate and Skerton. The contractor, I understand, does his work thoroughly in each case. At both places the refuse is deposited in a "tip."

Power has been obtained to contract for removal at Yealand.

In the other parts of the district removal is effected by the occupiers, and the refuse is chiefly used for manure.

SEWERS.—All the sewers appear to act well with the exception of the one at Galgate, which gives much trouble, owing to its tendency to become blocked up. As I have said before, the main trunk of the sewer is flushed from the silk mill, and is in good order, but the branch sewers, owing to the water supply not being laid into the houses, become blocked up, and require frequent flushings with a hose pipe.

A scheme is in hand for an extension of the sewers at Scotforth, also a new sewer for Bolton, and a water supply (to be obtained from Lancaster) for the same place.

COMMON LODGING HOUSES.—There are now two common lodging houses in the district of this Authority, a new one having been registered in Bulk. This house contains 31 beds.

The lodging house at Dudley is well kept, and I have heard no complaints.

INSPECTION OF THE DISTRICT.—This still goes on regularly. During the year 1898, Cockerham, Glasson Dock, Bulk, and a portion of Yealand, have been visited by myself, whilst the Inspector has, in addition, been over Galgate, Heysham, Overton, Middleton, Bolton, Slyne, and Sunderland.

CANAL BOATS.—The Inspector has during the 1898, made 34 visits to 21 Canal Boats, On these boats were 54 men, 14 women, and 12 children. There has been one infringement of the Act, namely, Absence of Certificate, and no legal proceedings have been taken. The boats were found in good condition and no case of infectious disease has occurred on board them.

DAIRIES, COWSHEDS, AND MILKSHOPS.—The regulations made by the Authority came into force on March 25th, 1898. No attempt has yet been made to enforce them, but an inspection and report on these places is now in hand, and the Authority will, after full consideration of each case, assert its power.

The cubic space per cow has not yet been fixed ; I, therefore, take this opportunity of suggesting 800 cubic feet, with a minimum floor space of 50 square feet per cow. At the same time I would point out to the

Authority that this air-space is useless, unless the the ventilation is always working and changing the air at least six times per hour. Attention should also be given to render the floors of these buildings impervious to moisture, so that the subsoil if renewed, as it should be, may not again become contaminated.

A good supply of clean water is also essential and should be insisted upon.

ANTHRAX.—On March 25th, 1898, a case of Anthrax was reported to me by the County Police. The carcase, was, I believe, buried and covered with quicklime.

SCHOOL CLOSURE.—During 1898, two schools have been closed by this Authority, the one at Glasson, on account of an outbreak of Mumps, and the one at Overton, on account of an epidemic of Whooping Cough.

I remain,

Mr. Chairman and Gentlemen,

Your obedient servant,

G. R. PARKER.

Medical Officer of Health

Lancaster, March 24th, 1898.

TABLE A.

Table of Deaths during the year 1898, in the Lancaster Rural Sanitary District, classified according to Diseases, Ages and Localities.

Names of Localities adopted for the purpose of these Statistics; public institutions being shown as separate localities. (Columns for Population and Births are in Table B.)	Mortality from all causes at subjoined Ages,								Mortality from Subjoined causes, distinguishing Deaths of Children under Five years of age.																					
									1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
													Fevers.																	
	All Ages.	Under 1 year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and upwards.		Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus.	Enteric or Typhoid.	Continued.	Relapsing.	Puerperal.	Cholera.	Erysipelas.	Measles.	Whooping Cough.	Diarrhœa and Dysentery.	Rheumatic Fever.	Phthisis.	Bronchitis, Pneumonia, & Pleurisy.	Heart Disease.	Influenza.	Injuries.	All Other Diseases.	Total.
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)																						
Lancaster	57	19	11	3	3	17	4	Under 5	....	1	....	....	....	....	....	....	....	....	....	....	....	3	....	....	9	....	....	....	17	30
								5 upwards	....	....	....	....	....	1	....	....	1	....	....	....	....	1	....	4	5	2	....	2	11	27
Royal Albert Asylum	10	....	....	5	5	....	....	Under 5	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
								5 upwards	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	2	....	1	....	....	7	10
Heaton	35	11	3	2	1	8	10	Under 5	....	....	....	....	....	....	....	....	....	....	....	....	1	1	....	....	1	....	....	....	11	14
								5 upwards	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	2	1	5	....	4	8	21
Warton	49	10	1	....	1	8	29	Under 5	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	1	1	....	....	....	9	12
								5 upwards	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	2	4	4	....	....	27	37
Ellel	42	11	1	1	1	12	16	Under 5	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	3	....	....	....	8	12
								5 upwards	....	....	....	....	....	1	....	....	1	....	....	....	....	....	1	....	....	5	....	....	22	30
Totals	193	51	16	11	11	45	59	Under 5	....	1	1	....	....	....	....	....	....	....	....	....	1	5	....	1	14	....	....	....	45	68
								5 upwards	....	....	....	....	....	3	....	....	2	....	....	....	....	1	1	10	10	17	....	6	75	125

TABLE B.

Table of Population, Births, and of New Cases of Infectious Sickness, coming to the knowledge of the Medical Officer of Health, during the year 1898, in the Lancaster Rural Sanitary District; classified according to Diseases, Ages, and Localities.

Names of Localities adopted for the purpose of these Statistics; Public Institutions being shown as separate localities. (a)	Population at all ages.		Registered Births. (d)	Age under 5 or over 5. (e)	New Cases of Sickness in each Locality, coming to the knowledge of the Medical Officer of Health.													Number of such Cases removed from their homes in the several Localities for Treatment in Isolated Hospital.												
	Census 1891. (b)	Estimated to mid'le of 1898. (c)			1	2	3	4	5	6	7	8	9	10	11	12	13	1	2	3	4	5	6	7	8	9	10	11	12	13
									Fevers.													Fevers.								
					Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus.	Enteric or Typhoid.	Continued	Relapsing.	Puerperal.	Cholera.	Erysipelas.	Measle .	Rotheln.	Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus.	Enteric or Typhoid.	Continued.	Relapsing.	Puerperal.	Cholera.	Erysipelas.	Totals.	
Lancaster	2,872	3,815	110	Under 5.... 5 upwards..	....	5	....	....	....	11	....	....	....	....	1	14	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Heaton	1,364	1,745	68	Under 5.... 5 upwards..	....	8	....	....	....	10	1	....	....	....	2	12	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Warton..	6,515	3,652	109	Under 5.... 5 upwards..	....	....	1	....	....	1	....	....	....	....	3	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Ellel	3,726	3,712	100	Under 5.... 5 upwards..	....	....	....	....	....	6	....	....	1	....	1	3	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Totals	14,477	12,924	387	Under 5.... 5 upwards..	....	13	1	....	....	28	1	....	1	....	7	31	....	....	....	....	....	....	....	....	....	....	....	....	....	....

I have no means of ascertaining the ages of these cases.

State here whether "Notification of Infectious Disease" is compulsory in the District? Yes. Since when? 1889. Besides the above-mentioned Diseases, insert in the columns with blank headings the names of any that are notifiable in the district, and fill the columns accordingly. State here the name of the Isolation Hospital used by the sick of the District. Mark (H) the Locality in which such Hospital is situated; and if not within the District, state where it is situated No Hospital.

TABLE C.

COUNTY OF LANCASTER.
SUMMARY OF MEDICAL OFFICER'S REPORT FOR 1896.

RURAL SANITARY DISTRICT OF LANCASTER.

Area in Statute Acres, 55,174. Population, (Census) 1891, 14,477.
Population, Estimated 1898, 12,924.

Name of Medical Officer of Health: G. R. PARKER. Salary, £50.

Births registered—*Male*, 191; *Female*, 196; Total, 387.
Deaths registered—*Male*, 102; *Female*, 91; Total, 193.

Birth Rate, 29·94; Death-Rate, 14·15; Rate of Infant Deaths, under one year, to 1,000 Births, 131.

Death Rate from the seven principal Zymotic Diseases, per 1,000 of population, 1·08.

Diseases prevalent. *Nothing Special* Period?

What action taken? *Disinfection.* Any Schools Closed? *Yes.* If so, for what Disease? *Mumps, and Whooping Cough.*

What is the Character of the Hospital Accommodation? *There is none.*

Is it Joint or otherwise? *None.* No. of Beds available for the District. *None.*

What were the Cases Treated? *None.*

Deaths in Hospital. *None.* From what Causes? *None.*

How is Disinfection carried out? *Sulphur Fumigation and various Disinfectant Powders.* Apparatus used? *None.*

Is the Infectious Disease (Notification) Act in force? *Yes.*

Are any Diseases not specifically mentioned in the Act notifiable (for instance Measles, Whooping Cough, Diarrhœa, &c.)? *Yes.*

If so, what are they? *Measles, and Rotheln*

What is the character of House Accommodation? *Good.*

Has any action been taken under "The Housing of the Working Classes Act, 1890"? *None.*

Have any houses condemned as unfit for human habitation been closed or demolished? If so, how many? *No.*

Is the Water Supply good and subject to your Inspection? *No.*

Is Scavenging carried out satisfactorily? *Yes.* By Sanitary Authority or Contract? *Contract. and Private effort.*

How is the refuse disposed of? *Skerton, and Galgate, carted to a tip.*

What is the character of Drainage and the form of Sewage disposal? *All sewers discharge into tidal waters.*

Canal Boats. *21. 34 Visits.*

What is the condition of Bakehouses?

Slaughter Houses?

Lodging Houses? *Two.* Are they Registered? *Yes.*

Are the Dairies, Cowsheds, and Milkshops periodically inspected? *No.* What is their condition? *Varies very much.*

Are they subject to Regulations made under the Order of the Local Government Board? *Yes.*

What amount of air space in cubic feet is required for each Cow? *Not decided yet.*

Have the Factories and Workshops been inspected, and with what result? *No.*

Food unfit for Human Consumption. Amount seized? *None.*

Any Special Report of Medical Officer of Health during the year? *No.*

Department of Inspectors of Nuisances:

No. of Notices served? 64.
No. of Nuisances remedied. 56.
No. of Legal Proceedings taken and result.

Smoke:

No. of Observations. *None.*
No of Legal Proceedings taken and result. *None.*
What is the time limit allowed for the emission of black smoke per hour? *None.*

Has the Authority adopted—*(a)* "The Infectious Disease (Prevention Act, 1890"? *No.* *(b)* "The Public Health Acts Amendment Act, 1890"? *No.*

TABLE D.

Shewing the Deaths from Zymotic Diseases during the last three years, in the four Sub-Districts.

	Scarlet Fever.	Diphtheria.	Influenza.	Whooping Cough.	Diarrhœa.	Puerperal Fever.	Enteric Fever.	Measles.	Total.
1896.									
Lancaster Rural Sub-dis.				5	2				7
Heaton Sub-district					2				2
Warton Sub-district......				1	2	1			4
Ellel Sub-district				1	1	1	3		6
1897.									
Lancaster Rural Sub-dis.					5		4	3	12
Heaton Sub-district						1	1		2
Warton-Sub-district......					1		1		2
Ellel Sub-district				1	1			1	3
1898.									
Lancaster Rural Sub-dis.	1	1	1		4	1	1		9
Heaton Sub-district ——				1	1		1		3
Warton Sub-district......		1	2						3
Ellel Sub-district			3	1	1	1	1		7

TABLE E.

Shewing the causes of death in Infants under one year old in the four Sub-districts.

Diseases.	Lancaster.	Heat'n	War'n	Ellel.	Total.
Bronchitis, Pneumonia and Pleurisy	3	1	1	4	9
Debility	3		6		9
Gastro-enteritis and Enteritis.........	1		2		3
Tabes Mesenterica and Marasmus ..	7	4		1	12
Diarrhœa	1	1		1	3
Convulsions		3	1	1	5
Premature Births		1		2	3
Peritonitis				1	1
Laryngitis	1				1
Jaundice	1				1
Glioma		1			1
Atelectasis	1			1	2
Meningitis	1				1
Total..................	19	11	10	11	51

To the Chairman and Members of the Lancaster Rural
District Council.

Mr. Chairman and Gentlemen,

I beg to present to you my Report for the Quarter ending March 31st, 1898.

Total Deaths in the Lancaster Rural Sanitary District during this quarter (including 4 at the Royal Albert Asylum) numbered 48, equal to an annual death rate of 14·85 per 1000 of population.

During the corresponding period of 1897, the total deaths (including 1 at the Royal Albert Asylum) numbered 61—equal to an annual death rate of 14·49 per 1000 of population.

Of the deaths occurring during the first quarter of 1898, 29 were males, and 19 females, 11 being under five years of age, and 37 over.

During this quarter there were two deaths due to the seven principal zymotic diseases, namely :—One Enteric Fever, and one Diphtheria—equal to an annual zymotic death rate of ·61 per 1000 of population.

During the corresponding quarter of 1897, there were seven such deaths registered, namely :—2 Measles, 2 Enteric Fever, 1 Diarrhœa, 1 Whooping Cough, and 1 Puerperal Fever—equal to an annual zymotic death rate of 2·23 per 1000 of population.

27 cases of infectious diseases have been reported to me during this quarter, namely :—

Measles	9
Enteric Fever	8
Continued Fever	1
Scarlet Fever	4
Erysipelas	4
Diphtheria	1
	27

Births in the Lancaster Rural Sanitary District during the quarter ending March 31st, 1898, were 92, comprised of 42 males, and 50 females—equal to an annual birth rate of 28·47 per 1000 of population.

During the corresponding quarter of 1897, there were 100 births registered—66 males and 34 females—equal to an annual birth rate of 31·95 per 1000 of population

I am, Gentlemen,

Your obedient servant,

G. R. PARKER,

Medical Officer of Health.

May 2nd, 1898.

To the Chairman and Members of the Lancaster Rural District Council.

Mr. Chairman and Gentlemen.

I beg to present to you my Report for the Quarter ending June 30th, 1898.

Total Deaths in the Lancaster Rural Sanitary District during this quarter (including 1 which occurred in the Royal Albert Asylum), 47, equal to an annual death rate of 14·54 per 1000 of population.

During the corresponding quarter of 1897, the total deaths numbered 51—equal to an annual death rate of 16·29 per 1000 of population.

Of these 47 deaths, 26 were those of males, and 21 those of females, 16 were under 5 years of age, and 31 over.

During this quarter there were 3 deaths due to zymotic diseases, viz., 1 Diarrhœa, and 2 Enteric Fever, equal to an annual zymotic death rate of ·92 per 1000 of population.

During the corresponding quarter of 1897, there were 2 deaths due to zymotic diseases, viz., 1 Diarrhœa, and 1 Measles, equal to an annual zymotic death rate of ·63 per 1000 of population.

Twelve cases of infectious disease have been reported during the past quarter, viz.,

Measles	5
Scarlet Fever	3
Enteric Fever.............................	4
	12

Births in the Lancaster Rural Sanitary District during the quarter ending June 30th, 1898, were 96, 42 were those of males, and 54 were those of Females, and equal to an annual birth rate of 29·71 per 1000 of population.

During the corresponding quarter of 1897, there were 83 births registered, 41 males, and 42 females, equal to an annual birth rate of 26·52 per 1000 of population.

I remain,

Mr. Chairman and Gentlemen,

Your obedient servant,

G. R. PARKER,

Medical Officer of Health

September, 6th, 1898.

TO THE CHAIRMAN AND MEMBERS OF THE LANCASTER RURAL DISTRICT COUNCIL.

MICHAELMAS QUARTER.

MR. CHAIRMAN AND GENTLEMEN,

I beg to present to you my Report for the Quarter ending September 30th, 1898.

TOTAL DEATHS in the Lancaster Rural Sanitary District during this quarter, 44, equal to an annual death rate of 13·61 per 1000 of population.

Two deaths occurred in the Royal Albert Asylum.

During the corresponding quarter of 1897, the total deaths numbered 54, equal to an annual death rate of 17·25 per 1000 of population.

Of the 44 deaths registered during this quarter, 16 were those of males, and 28 those of females, 16 were under 5 years of age, and 28 over.

During this quarter there were 6 deaths due to zymotic diseases, viz., 1 Scarlet Fever, 4 Diarrhœa, and 1 Puerperal Fever, equal to an annual zymotic death rate of 1·85 per 1000 of population.

During the corresponding quarter of 1897, there were 7 fatal cases of zymotic disease, viz., 2 Measles, 3 Diarrhœa, and 2 Enteric Fever, equal to an annual zymotic death rate of 2·23 per 1000 of population.

Fifteen cases of infectious disease have been reported to me during this quarter, namely :—

Erysipelas	1
Scarlet Fever	3
Measles	6
Enteric Fever	5
	15

Births in the Lancaster Rural Sanitary District during the quarter ending September 30th, 1898, were 93, made up of 52 males, and 41 females, equal to an annual birth rate of 28·78 per 1000 of population.

In the corresponding quarter of 1897, there were the same number as this year, namely :—93, 53 males, and 40 females, equal to an annual birth rate of 29·72 per 1000 of population.

I remain, Gentlemen,

Your obedient servant,

G. R. PARKER,

Medical Officer of Health.

October 21st, 1898.

TO THE CHAIRMAN AND MEMBERS OF THE LANCASTEK RURAL DISTRICT COUNCIL.

MR. CHAIRMAN AND GENTLEMEN,

I beg to present to you my Report for the Quarter ending December 31st, 1898.

TOTAL DEATHS in the Lancaster Rural Sanitary District (including 3 at the Royal Albert Asylum), 54, equal to an annual death rate of 16·71 per 1000 of population.

During the corresponding quarter of 1897, there were 42 deaths, and the death rate was 13·42 per 1000 of population.

Of the 54 deaths occurring during the last quarter of 1898, 31 were those of males, and 23 were those of females, 24 were under 5 years, and 30 over that age.

During this quarter there have been three deaths from the seven principal zymotic diseases, 1 Whooping Cough, 1 Puerperal Fever, and 1 Diarrhœa, equal to an annual zymotic death rate of ·92 per 1000 of population.

During the corresponding quarter of 1897, there were 2 deaths from the seven principal zymotic diseases, 2 Enteric Fever, equal to an annual zymotic death rate of ·63 per 1000 of population.

There have been 26 cases of infectious disease reported to me during the last quarter, viz :

Scarlet Fever	3
Enteric Fever	11
Puerperal Fever	1
Measles	9
Erysipelas	2
	26

Births in the Lancaster Rural Sanitary District, during the Quarter ending December 31st, 1898, were 106, 55 were those of males, and 51 those of females, and equal to an annual birth rate of 32·80 per 1000 of population.

In the corresponding quarter of 1897, there were 93 births, 57 males and 36 females, equal to an annual birth rate of 29·72 per 1000 of population.

I remain,

Mr. Chairman and Gentlemen,

Your obedient servant,

G. R. PARKER.

Medical Officer of Health

January 13th, 1899.